STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 163264

TO: Ben Sackey **Location: REM 5B31/5C18** **Art Unit: 1626** **August 22, 2005** **Case Serial Number: 10/687411**	**From: P. Sheppard** **Location: Remsen Building** **Phone: (571) 272-2529** **sheppard@uspto.gov**

Search Notes

FOR OFFICIAL USE ONLY

ACCESS DB # _____

PLEASE PRINT CLEARLY

Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: BEN SACKEY Examiner #: 73489 Date: 8/11/05

Art Unit: 1626 Phone Number: 2-0704 Serial Number: 10/687,411

Location (Bldg/Room#): Rem 5B31 (Mailbox #): 5C 18 Results Format Preferred (circle): PAPER DISK

****

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Water Resistant Catalyst for the production of diaryl carbonates

Inventors (please provide full names): Soloveichik et al.

Earliest Priority Date: 10/15/03

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

A method for making a diaryl carbonate comprising contacting a mixture of phenolic compd with carbon monoxide and oxygen in the presence of carbonylation catalyst comprising palladium, a co-catalyst, a base, a halide source and a chemical additive for increasing the amount of diaryl carbonate

Please see the selection of phenolic compds attached.

Thanks

```
=> d his ful

     (FILE 'HOME' ENTERED AT 11:04:42 ON 22 AUG 2005)

     FILE 'REGISTRY' ENTERED AT 11:05:09 ON 22 AUG 2005
L1             STR
L2          6856 SEA SSS FUL L1
L3        125595 SEA ABB=ON  PLU=ON  ACTIVATING(W)SOLVENT OR ETHER? OR SULFONE?
                 OR NITRILES OR AMIDES OR CARBONATE? OR POLYETHER? OR DIGLYME
                 OR TRIGLYME OR TETRAGLYME
                 E SOLVENT
L4          1255 SEA ABB=ON  PLU=ON  SOLVENT OR SOLVENTS
L5            95 SEA ABB=ON  PLU=ON  NITRILE?/CN
L6           786 SEA ABB=ON  PLU=ON  AMIDE?/CN
L7         16418 SEA ABB=ON  PLU=ON  PHENOLIC OR CRESOL OR 4-FLUOROPHENOL?/CN
                 OR BISPHENOL A?/CN OR METHYL SALICYLATE?/CN
L8             1 SEA ABB=ON  PLU=ON  PHENOL/CN

     FILE 'HCAPLUS' ENTERED AT 11:12:12 ON 22 AUG 2005
L9         24018 SEA ABB=ON  PLU=ON  L2 OR DIARYL(W)CARBONATE
L10      2183760 SEA ABB=ON  PLU=ON  L3 OR L4 OR L5 OR L6 OR ACTIVATING(W)SOLVEN
                 T OR ETHER? OR SULFONE? OR NITRILE OR AMIDE  OR CARBONATE? OR
                 POLYETHER? OR DIGLYME OR TRIGLYME OR TETRAGLYME
L11       570160 SEA ABB=ON  PLU=ON  L7 OR L8 OR PHENOLIC OR CRESOL OR 4(W)FLUOR
                 OPHENOL? OR BISPHENOL(W)A OR METHYL(W) SALICYLATE? OR PHENOL
L12         5461 SEA ABB=ON  PLU=ON  L9(L)PREPARATION/RL
L13       335274 SEA ABB=ON  PLU=ON  REACTANT/RL(L)L10
L14        65329 SEA ABB=ON  PLU=ON  REACTANT/RL(L)L11
L15          677 SEA ABB=ON  PLU=ON  L12 AND L13 AND L14

     FILE 'REGISTRY' ENTERED AT 11:22:23 ON 22 AUG 2005
L16       101866 SEA ABB=ON  PLU=ON  PALLADIUM OR ACETYLACETONATE
L17        19213 SEA ABB=ON  PLU=ON  CARBON MONOXIDE?/CN OR OXYGEN
L19        17811 SEA ABB=ON  PLU=ON  (TETRAMETHYLAMMONIUM OR TETRAMETHYL(L)AMMON
                 IUM OR PHOSPHONIUM OR AMMONIUM OR LITHIUM OR SODIUM OR
                 POTASSIUM)(L)HYDROXIDE OR (AMINE  OR  TRIETHYLAMINE OR
                 TRIALKYLAMINE)(L)HYDRATE
L20       165455 SEA ABB=ON  PLU=ON  HALIDE OR BROMIDE OR (LITHIUM OR MAGNESIUM)
                 (L)BROMIDE OR (AMMONIUM OR PHOSPHONIUM)(W)HALIDE OR ALKALI
                 METAL?/CN

     FILE 'HCAPLUS' ENTERED AT 11:53:08 ON 22 AUG 2005
L22       197938 SEA ABB=ON  PLU=ON  L16 OR PALLADIUM OR ACETYLACETONATE
L23      1846505 SEA ABB=ON  PLU=ON  L17 OR CARBON(W)MONOXIDE OR CO OR OXYGEN
                 OR O2
L24       904208 SEA ABB=ON  PLU=ON  L19 OR BASE OR (PHOSPHONIUM OR ?AMMONIUM
                 OR LITHIUM OR SODIUM OR POTASSIUM)(3A)HYDROXIDE OR ?AMINE(5A)
                 HYDRATE
L25       565021 SEA ABB=ON  PLU=ON  L20 OR HALIDE OR BROMIDE ALKALI(W)METAL?

     FILE 'REGISTRY' ENTERED AT 12:00:18 ON 22 AUG 2005
L26       243271 SEA ABB=ON  PLU=ON  COPPER?/CN
L27       170458 SEA ABB=ON  PLU=ON  TITANIUM

     FILE 'HCAPLUS' ENTERED AT 12:01:52 ON 22 AUG 2005
L28           25 SEA ABB=ON  PLU=ON  L15 AND L23 AND L24 AND L25
L29           24 SEA ABB=ON  PLU=ON  L28 AND PD=<OCTOBER 14, 2003

     FILE 'HCAPLUS' ENTERED AT 12:05:46 ON 22 AUG 2005
                 D STAT QUE
```

```
               D IBIB ABS HITSTR L29 1-24
L30           38 SEA ABB=ON  PLU=ON  L13 AND L14 AND L23 AND L22 AND L24 AND
                 L25
L31           18 SEA ABB=ON  PLU=ON  L30 NOT L29
L32            5 SEA ABB=ON  PLU=ON  L31 AND (L26 OR L27 OR CO(W)CATALY?)
L33            5 SEA ABB=ON  PLU=ON  (L32 OR L28) NOT L29
               D STAT QUE
               D IBIB ABS HITSTR L33 1-5
```

FILE HOME

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 19 AUG 2005 HIGHEST RN 861198-35-8
DICTIONARY FILE UPDATES: 19 AUG 2005 HIGHEST RN 861198-35-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

```
**********************************************************************
*                                                                    *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,    *
* effective March 20, 2005.  A new display format, IDERL, is now     *
* available and contains the CA role and document type information.  *
*                                                                    *
**********************************************************************
```

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

FILE HCAPLUS

FILE COVERS 1907 - 22 Aug 2005 VOL 143 ISS 9
FILE LAST UPDATED: 21 Aug 2005 (20050821/ED)

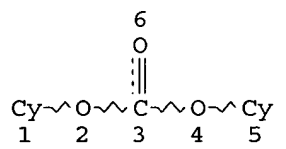
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>

```
=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 12:05:46 ON 22 AUG 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)
```

```
FILE COVERS 1907 - 22 Aug 2005  VOL 143 ISS 9
FILE LAST UPDATED: 21 Aug 2005  (20050821/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=>
=>

=> d stat que
L1                STR
```



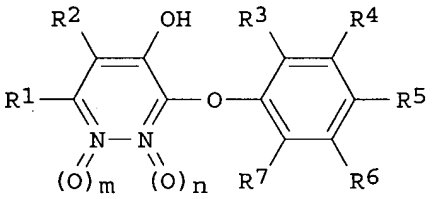

```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   6

STEREO ATTRIBUTES: NONE
L2          6856 SEA FILE=REGISTRY SSS FUL L1
L3        125595 SEA FILE=REGISTRY ABB=ON  PLU=ON  ACTIVATING(W)SOLVENT OR
                 ETHER? OR SULFONE? OR NITRILES OR AMIDES OR CARBONATE? OR
                 POLYETHER? OR DIGLYME OR TRIGLYME OR TETRAGLYME
L4          1255 SEA FILE=REGISTRY ABB=ON  PLU=ON  SOLVENT OR SOLVENTS
L5            95 SEA FILE=REGISTRY ABB=ON  PLU=ON  NITRILE?/CN
L6           786 SEA FILE=REGISTRY ABB=ON  PLU=ON  AMIDE?/CN
L7         16418 SEA FILE=REGISTRY ABB=ON  PLU=ON  PHENOLIC OR CRESOL OR
                 4-FLUOROPHENOL?/CN OR BISPHENOL A?/CN OR METHYL SALICYLATE?/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PHENOL/CN
L9         24018 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 OR DIARYL(W)CARBONATE
L10      2183760 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L3 OR L4 OR L5 OR L6 OR
                 ACTIVATING(W)SOLVENT OR ETHER? OR SULFONE? OR NITRILE OR AMIDE
                  OR CARBONATE? OR POLYETHER? OR DIGLYME OR TRIGLYME OR
```

```
                TETRAGLYME
L11       570160 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 OR L8 OR PHENOLIC OR
                 CRESOL OR 4(W)FLUOROPHENOL? OR BISPHENOL(W)A OR METHYL(W)
                 SALICYLATE? OR PHENOL
L12         5461 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L9(L)PREPARATION/RL
L13       335274 SEA FILE=HCAPLUS ABB=ON  PLU=ON  REACTANT/RL(L)L10
L14        65329 SEA FILE=HCAPLUS ABB=ON  PLU=ON  REACTANT/RL(L)L11
L15          677 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12 AND L13 AND L14
L17        19213 SEA FILE=REGISTRY ABB=ON  PLU=ON  CARBON MONOXIDE?/CN OR
                 OXYGEN
L19        17811 SEA FILE=REGISTRY ABB=ON  PLU=ON  (TETRAMETHYLAMMONIUM OR
                 TETRAMETHYL(L)AMMONIUM OR PHOSPHONIUM OR AMMONIUM OR LITHIUM
                 OR SODIUM OR POTASSIUM)(L)HYDROXIDE OR (AMINE  OR  TRIETHYLAMIN
                 E OR TRIALKYLAMINE)(L)HYDRATE
L20       165455 SEA FILE=REGISTRY ABB=ON  PLU=ON  HALIDE OR BROMIDE OR
                 (LITHIUM OR MAGNESIUM)(L)BROMIDE OR (AMMONIUM OR PHOSPHONIUM)(W
                 )HALIDE OR ALKALI METAL?/CN
L23      1846505 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 OR CARBON(W)MONOXIDE OR
                 CO OR OXYGEN OR O2
L24       904208 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19 OR BASE OR (PHOSPHONIUM
                 OR ?AMMONIUM OR LITHIUM OR SODIUM OR POTASSIUM)(3A)HYDROXIDE
                 OR ?AMINE(5A) HYDRATE
L25       565021 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 OR HALIDE OR BROMIDE
                 ALKALI(W)METAL?
L28           25 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 AND L23 AND L24 AND L25
L29           24 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 AND PD=<OCTOBER 14, 2003


=>

=>

=> d ibib abs hitstr l29 1-24

L29  ANSWER 1 OF 24  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2003:154410  HCAPLUS
DOCUMENT NUMBER:          138:187781
TITLE:                    Preparation of 3-phenoxy-4-pyridazinol derivatives as
                          herbicides
INVENTOR(S):              Tsukamoto, Yoshihisa; Komai, Hiroyuki; Kadotani,
                          Junji; Koi, Kiyoshi; Mio, Shigeru; Takeshiba, Hideo
PATENT ASSIGNEE(S):       Sankyo Company, Limited, Japan
SOURCE:                   PCT Int. Appl., 560 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     WO 2003016286         A1    20030227    WO 2002-JP8278           20020814 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
```

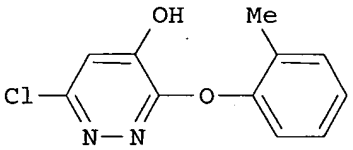
	CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2457575		AA	20030227	CA 2002-2457575	20020814 <--
JP 2004002263		A2	20040108	JP 2002-236164	20020814
EP 1426365		A1	20040609	EP 2002-760636	20020814
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1543455		A	20041103	CN 2002-816090	20020814
ZA 2004001572		A	20050311	ZA 2004-1572	20040226
US 2005037925		A1	20050217	US 2004-487013	20040227
PRIORITY APPLN. INFO.:				JP 2001-248014 A	20010817
				JP 2002-82219 A	20020325
				WO 2002-JP8278 W	20020814

OTHER SOURCE(S): MARPAT 138:187781

GI



I



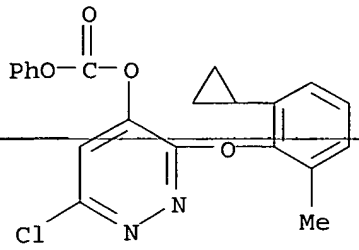
II

AB The title compds. I [wherein R1 = H, halo, halo(alkyl), cycloalkyl, alkenyl, CN, alkyl-**CO**, dialkylcarbamoyl, alkoxy, (un)substituted Ph, 5-6 membered heterocyclyl(oxy), or PhO; R2 = H, halo, (alkoxy)alkyl, alkoxy-**CO**, trialkylsilyl, (un)substituted PhCO, PhO, or PhS; R3-R7 = independently H, halo, alkynyl, bicycloalkyl, CN, CHO, alkyl-**CO**, CO2H, alkoxy-**CO**, (dialkyl)carbamoyl, NO2, OH, (halo)alkoxy, alkoxyalkoxy, alkylthio, alkyl-SO, alkyl-SO2, trialkylsilyl, (un)substituted alkyl, alkenyl, cycloalkyl, PhCO, Ph, 3-6 membered heterocyclyl, amino, PhO, 5-6 membered heterocyclyloxy, or PhSO3; or R3-R7 = neighboring two of them form (un)substituted 3-6 membered cyclohydrocarbyl with the carbon atoms attached; m and n = independently 0 or 1] and salts or ester derivs. thereof are prepared For example, 3,6-dichloropyridazine was coupled with 2-methylphenol in the presence of K2CO3 to give 6-chloro-3-(2-methylphenoxy)pyridazine (57%). The pyridazine obtained was treated with POCl3 and Cl2 to produce 4,6-dichloro-3-(2-methylphenoxy)pyridazine (42%). The above compound was hydrolyzed by aqueous NaOH in 1,4-dioxane in the presence of Bu4NCl to afford 6-chloro-3-(2-methylphenoxy)-4-pyridazinol (II) (37%). I showed herbicidal activity, and are useful as herbicides. Formulations containing I as an active ingredient were also described.

IT **499229-28-6P**
RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(herbicide; preparation of phenoxypyridazinol derivs. as herbicides)

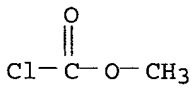
RN 499229-28-6 HCAPLUS

CN Carbonic acid, 6-chloro-3-(2-cyclopropyl-6-methylphenoxy)-4-pyridazinyl phenyl ester (9CI) (CA INDEX NAME)

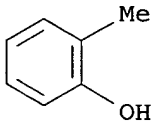


IT **79-22-1**, Methyl chlorocarbonate **95-48-7**, 2-Methylphenol, reactions **100-39-0**, Benzyl bromide **106-96-7**, Propargyl bromide **107-30-2**, Chloromethoxymethane **108-24-7**, Acetic anhydride **135-02-4**, 2-Methoxybenzaldehyde **150-19-6**, 3-Methoxyphenol **506-68-3**, Bromocyanide **920-39-8**, Isopropylmagnesium bromide **1195-09-1**, 2-Methoxy-5-methylphenol **1310-73-2**, **Sodium hydroxide**, reactions **1779-49-3**, Methyltriphenylphosphonium bromide **2219-82-1**, 2-tert-Butyl-6-methylphenol **3970-21-6**, 2-Methoxyethoxymethyl chloride **7789-59-5**, Phosphoric tribromide
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(preparation of phenoxypyridazinol derivs. as herbicides)

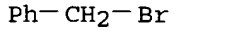
RN 79-22-1 HCAPLUS
CN Carbonochloridic acid, methyl ester (9CI) (CA INDEX NAME)



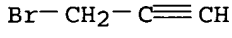
RN 95-48-7 HCAPLUS
CN Phenol, 2-methyl- (9CI) (CA INDEX NAME)



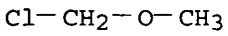
RN 100-39-0 HCAPLUS
CN Benzene, (bromomethyl)- (9CI) (CA INDEX NAME)



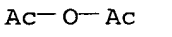
RN 106-96-7 HCAPLUS
CN 1-Propyne, 3-bromo- (9CI) (CA INDEX NAME)



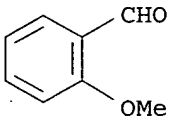
RN 107-30-2 HCAPLUS
CN Methane, chloromethoxy- (9CI) (CA INDEX NAME)



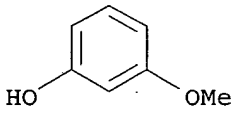
RN 108-24-7 HCAPLUS
CN Acetic acid, anhydride (9CI) (CA INDEX NAME)



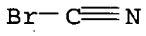
RN 135-02-4 HCAPLUS
CN Benzaldehyde, 2-methoxy- (9CI) (CA INDEX NAME)



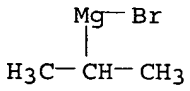
RN 150-19-6 HCAPLUS
CN Phenol, 3-methoxy- (9CI) (CA INDEX NAME)



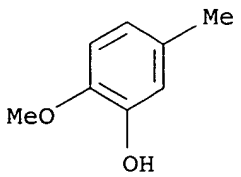
RN 506-68-3 HCAPLUS
CN Cyanogen bromide ((CN)Br) (9CI) (CA INDEX NAME)



RN 920-39-8 HCAPLUS
CN Magnesium, bromo(1-methylethyl)- (9CI) (CA INDEX NAME)



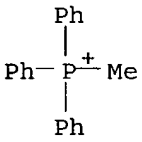
RN 1195-09-1 HCAPLUS
CN Phenol, 2-methoxy-5-methyl- (9CI) (CA INDEX NAME)



RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

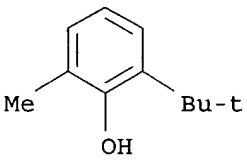
Na—OH

RN 1779-49-3 HCAPLUS
CN Phosphonium, methyltriphenyl-, bromide (8CI, 9CI) (CA INDEX NAME)



● Br^-

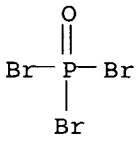
RN 2219-82-1 HCAPLUS
CN Phenol, 2-(1,1-dimethylethyl)-6-methyl- (9CI) (CA INDEX NAME)



RN 3970-21-6 HCAPLUS
CN Ethane, 1-(chloromethoxy)-2-methoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

MeO—CH_2—CH_2—O—CH_2Cl

RN 7789-59-5 HCAPLUS
CN Phosphoric tribromide (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:77802 HCAPLUS
DOCUMENT NUMBER: 138:124222
TITLE: Process and catalyst systems for the carbonylation manufacture of diaryl carbonates from phenols and

carbon monoxide and dioxide
INVENTOR(S): Reisinger, Claus-Peter; Hansen, Sven Michael; Fischer, Peter
PATENT ASSIGNEE(S): Bayer A.-G., Germany; Bayer Materialscience A.-G.
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

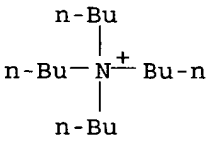
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1279659	A2	20030129	EP 2002-15584	20020715 <--
EP 1279659	A3	20040303		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
DE 10136856	A1	20030213	DE 2001-10136856	20010727 <--
SG 103877	A1	20040526	SG 2002-4323	20020712
JP 2003096027	A2	20030403	JP 2002-211168	20020719 <--
US 2003036663	A1	20030220	US 2002-200667	20020722 <--
US 6852872	B2	20050208		
BR 2002002955	A	20030603	BR 2002-2955	20020725 <--
CN 1400204	A	20030305	CN 2002-127060	20020726 <--

PRIORITY APPLN. INFO.: DE 2001-10136856 A 20010727
OTHER SOURCE(S): MARPAT 138:124222

AB A process and for the carbonylation manufacture of diaryl carbonates (e.g., di-Ph carbonate) from phenols (e.g., phenol) and **carbon monoxide** and dioxide is conducted in the presence of a catalyst system comprising a Group VIIIB metal salt (e.g., palladium dibromide) where there are at least two metal salts (e.g., manganese trisacetylacetonate) and a **base** (e.g., tetrabutylammonium bromide).

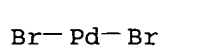
IT **1643-19-2**, Tetrabutylammonium bromide **13444-94-5**, Palladium dibromide
RL: CAT (Catalyst use); USES (Uses)
(catalysts for the carbonylation manufacture of diaryl carbonates from phenols and **carbon monoxide** and dioxide)

RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



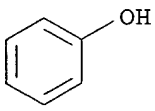
● Br^-

RN 13444-94-5 HCAPLUS
CN Palladium bromide (PdBr2) (7CI, 8CI, 9CI) (CA INDEX NAME)

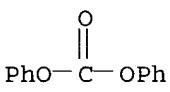


IT **108-95-2**, **Phenol**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(catalysts for the carbonylation manufacture of diaryl **carbonates** from **phenols** and **carbon monoxide** and dioxide)

RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(process and catalyst systems for the carbonylation manufacture of **diaryl carbonates** from phenols and **carbon monoxide** and dioxide)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **630-08-0**, **Carbon monoxide**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(process and catalyst systems for the carbonylation manufacture of diaryl **carbonates** from **phenols** and **carbon monoxide** and dioxide)
RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

L29 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:907214 HCAPLUS
DOCUMENT NUMBER: 137:386324
TITLE: Method and catalysts for producing aromatic carbonate esters from phenols and **carbon monoxide**
INVENTOR(S): Pressman, Eric James; Ofori, John Yaw
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2002177724	A1	20021128	US 2001-822531	20010330 <--
US 6800779	B2	20041005		

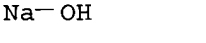
PRIORITY APPLN. INFO.: US 2001-822531 20010330

AB A method for economically producing aromatic carbonates (e.g., di-Ph carbonate) from aromatic hydroxy compds. (e.g., phenol) is described which in one embodiment comprises the steps of: (i) contacting, at a temperature sufficient to keep the mixture molten, at least one aromatic hydroxy compound with a catalyst composition comprising the following and any reaction products thereof: (A) at least one Group VIII metal or a compound; (B) at least one salt; (C) at least one metal **co**-catalyst; and (D) optionally, at least one activating solvent; (ii) optionally heating the mixture at atmospheric pressure to a temperature above that sufficient to keep the mixture molten; (iii) pressurizing the mixture with **carbon monoxide**; (iv) optionally heating the mixture under pressure of **carbon monoxide** to a temperature above that sufficient to keep the mixture molten; (v) optionally maintaining the mixture under pressure of **carbon monoxide** for a time period; (vi) introducing **oxygen** to the mixture to a desired concentration of **oxygen** in **carbon monoxide**; (vii) starting gas flow to the mixture at a desired concentration of **oxygen** and **carbon monoxide** ; (viii) optionally maintaining gas flow for a time period at less than a desired ultimate temperature for the mixture; and (ix) optionally heating the mixture to a desired ultimate temperature under flow of gases.

IT **1310-73-2**, **Sodium hydroxide**, uses
RL: CAT (Catalyst use); USES (Uses)
(**base**; catalysts for producing aromatic carbonate esters from phenols and **carbon monoxide**)

RN 1310-73-2 HCAPLUS

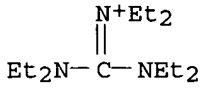
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)



IT **89610-32-2**, Hexaethylguanidinium bromide
RL: CAT (Catalyst use); USES (Uses)
(catalyst for producing aromatic carbonate esters from phenols and **carbon monoxide**)

RN 89610-32-2 HCAPLUS

CN Ethanaminium, N-[bis(diethylamino)methylene]-N-ethyl-, bromide (9CI) (CA INDEX NAME)

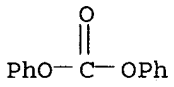


IT **7647-15-6**, Sodium bromide, uses
RL: CAT (Catalyst use); USES (Uses)
(catalysts for producing aromatic carbonate esters from phenols and **carbon monoxide**)

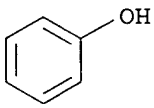
RN 7647-15-6 HCAPLUS
CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)

Br—Na

IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(method and catalysts for producing aromatic carbonate esters from phenols and **carbon monoxide**)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2**, **Phenol**, reactions **630-08-0**, **Carbon monoxide**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(method and catalysts for producing aromatic **carbonate** esters from **phenols** and **carbon monoxide**)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

IT **7782-44-7**, **Oxygen**, reactions
RL: RGT (Reagent); RACT (Reactant or reagent)
(method and catalysts for producing aromatic carbonate esters from phenols and **carbon monoxide** using)
RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:900782 HCAPLUS

DOCUMENT NUMBER: 138:4417
TITLE: Preparation of diaryl carbonates
INVENTOR(S): Tange, Shinya; Ohashi, Kenji; Nagashima, Ryoichi; Yoshizato, Hidenobu
PATENT ASSIGNEE(S): Teijin Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

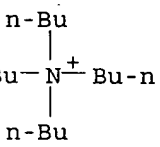
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002338525	A2	20021127	JP 2001-144324	20010515 <--
PRIORITY APPLN. INFO.:			JP 2001-144324	20010515

OTHER SOURCE(S): MARPAT 138:4417

AB In preparation of R2CO3 [R = (un)substituted C6-15 aryl], useful as materials for aromatic polycarbonates, by oxidative carbonylation of ROH (R = same as above) with **CO** and **O2** in the presence of catalysts and inert substance (A) while removing H2O formed during reaction together with (A), (A) is recovered from byproduct (Y) through a process involving (1) ≥1 step to decrease water content and (2) ≥1 step to distill (A). This method increases conversion, selectivity, or yield and the recovered (A) can be reused in the reaction. A mixture containing PhOH, THF, Pd(OAc)2, Mn(OAc)2, Bu4N+ Br-, and (Bu4N)4SiWMo11O40 was bubbled with **CO** and **O2** at 80° and 0.780 MPa for 5 h to give Ph2CO3 containing 0.2% H2O at selectivity 98.7%. Mixed vapor formed during the reaction was continuously fed to a PhOH trap and mixed vapor passed through the trap was introduced to a condenser to recover **CO** and **O2** for reuse. The condensate containing 96% THF and 4% H2O was fed to the bottom of an extraction column, where aqueous NaOH solution was fed from the top at 40° and 0.1 MPa to give THF containing 0.4% H2O. The recovered THF was distilled using a batch distillation column to obtain THF containing ≤30 ppm H2O from the bottom.

IT **1643-19-2**, Tetrabutylammonium bromide
RL: CAT (Catalyst use); USES (Uses)
(catalyst; preparation of diaryl carbonates by oxidative carbonylation of phenols under azeotropic removal of H2O)

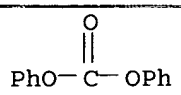
RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



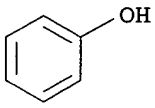
● Br^-

IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of **diaryl carbonates** by oxidative

carbonylation of phenols under azeotropic removal of H2O)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



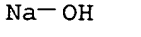
IT **108-95-2**, **Phenol**, reactions **630-08-0**,
Carbon monoxide, reactions **7782-44-7**,
Oxygen, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(preparation of diaryl **carbonates** by oxidative carbonylation of **phenols** under azeotropic removal of H2O)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

IT **1310-73-2**, **Sodium hydroxide**, uses
RL: NUU (Other use, unclassified); USES (Uses)
(water removal by extraction with solution of; preparation of diaryl carbonates by
oxidative carbonylation of phenols under azeotropic removal of H2O)
RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)



L29 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:551630 HCAPLUS
DOCUMENT NUMBER: 137:95535
TITLE: Method of sustaining catalyst activity in the oxidative carbonylation catalytic production of

aromatic carbonates
INVENTOR(S): Pressman, Eric James
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6423863	B1	20020723	US 2001-681940	20010628 <--
WO 2003002507	A1	20030109	WO 2002-US11797	20020410 <--

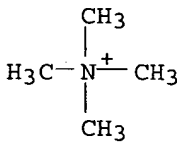
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-681940 A 20010628

AB The present invention is directed to a method for sustaining the catalytic activity of a carbonylation catalyst composition, after changes in reactor pressure and temperature, in the catalytic production of aromatic carbonates (e.g., di-Ph carbonate).

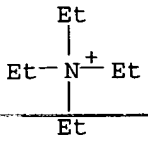
IT **75-59-2**, **Tetramethylammonium hydroxide**
77-98-5, **Tetraethylammonium hydroxide**
1310-58-3, **Potassium hydroxide**, reactions
1310-65-2, **Lithium hydroxide 1310-73-2**
, **Sodium hydroxide**, reactions **32680-30-1**,
Methyltributylammonium hydroxide
RL: RGT (Reagent); RACT (Reactant or reagent)
(**base**; method of sustaining catalyst activity in the oxidative carbonylation catalytic production of aromatic carbonates)

RN 75-59-2 HCAPLUS
CN Methanaminium, N,N,N-trimethyl-, hydroxide (9CI) (CA INDEX NAME)



● OH^-

RN 77-98-5 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, hydroxide (9CI) (CA INDEX NAME)



● OH^-

RN 1310-58-3 HCAPLUS
CN Potassium hydroxide (K(OH)) (9CI) (CA INDEX NAME)

K—OH

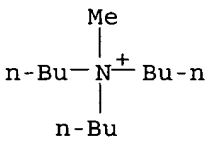
RN 1310-65-2 HCAPLUS
CN Lithium hydroxide (Li(OH)) (9CI) (CA INDEX NAME)

Li—OH

RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

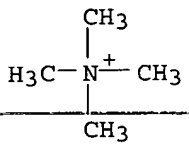
Na—OH

RN 32680-30-1 HCAPLUS
CN 1-Butanaminium, N,N-dibutyl-N-methyl-, hydroxide (9CI) (CA INDEX NAME)



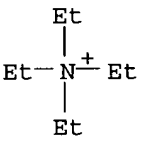
● OH^-

IT **64-20-0**, Tetramethylammonium bromide **71-91-0**, Tetraethylammonium bromide **7550-35-8**, Lithium bromide **7647-15-6**, Sodium bromide, uses **89610-32-2**, Hexaethylguanidinium bromide
RL: CAT (Catalyst use); USES (Uses)
(method of sustaining catalyst activity in the oxidative carbonylation catalytic production of aromatic carbonates)
RN 64-20-0 HCAPLUS
CN Methanaminium, N,N,N-trimethyl-, bromide (9CI) (CA INDEX NAME)



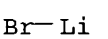
● Br^-

RN 71-91-0 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)

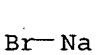


● Br^-

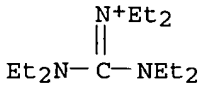
RN 7550-35-8 HCAPLUS
CN Lithium bromide (LiBr) (9CI) (CA INDEX NAME)



RN 7647-15-6 HCAPLUS
CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)



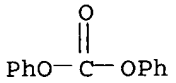
RN 89610-32-2 HCAPLUS
CN Ethanaminium, N-[bis(diethylamino)methylene]-N-ethyl-, bromide (9CI) (CA INDEX NAME)



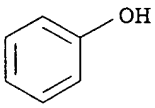
● Br^-

IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(method of sustaining catalyst activity in the oxidative carbonylation

catalytic production of aromatic carbonates)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2**, **Phenol**, reactions **630-08-0**,
Carbon monoxide, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(method of sustaining catalyst activity in the oxidative carbonylation catalytic production of aromatic **carbonates**)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:466747 HCAPLUS
DOCUMENT NUMBER: 137:33683
TITLE: An improved process for removing water from oxidative carbonylation in production of diaryl carbonates
INVENTOR(S): Ofori, John Yaw; Pressman, Eric James; Shalyaev, Kirill Vladimirovich; Williams, Eric Douglas; Battista, Richard Anthony
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S. Pat. Appl. Publ., 20 pp., Cont.-in-part of U.S. Ser. No. 736,885.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002077497	A1	20020620	US 2001-961747	20010924 <--
US 6420589	B2	20020716		
WO 2002048088	A2	20020620	WO 2001-US47205	20011113 <--
WO 2002048088	A3	20021219		

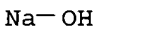
WO 2002048088 B1 20030130
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002026018	A5	20020624	AU 2002-26018		20011113 <--
DE 10197052	T	20031023	DE 2001-10197052		20011113
JP 2004526678	T2	20040902	JP 2002-549624		20011113
US 2002111507	A1	20020815	US 2002-121102		20020411 <--
US 6472551	B2	20021029			
PRIORITY APPLN. INFO.:			US 2000-736885	A2	20001214
			US 2001-961747	A	20010924
			WO 2001-US47205	W	20011113

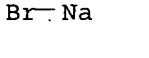
AB The process comprises: (1) contacting at least one aromatic hydroxy compound with **carbon monoxide** and **oxygen** in the presence of a catalyst composition (I), (2) removing a liquid stream (L) from the reaction vessel, (3) transferring L to a flash vessel to remove the majority of water under reduced pressure, and (4) returning at least a portion of a dried L back to the reaction vessel, wherein at least a portion of diaryl carbonate is recovered from L either before or after water removal and I contains: (A) at least one metal having an atomic number ≥44 from Group 8, 9, or 10, (B) at least one alkali metal salt, (C) at least one metal cocatalyst, (D) at least one activating organic solvent, and (E) optionally one **base.**

IT **1310-73-2**, **Sodium hydroxide**, uses
7647-15-6, Sodium bromide, uses **13444-94-5**, Palladium bromide
RL: CAT (Catalyst use); USES (Uses)
(in production of di-Ph carbonate by oxidative carbonylation)

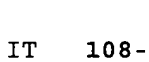
RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)



RN 7647-15-6 HCAPLUS
CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)

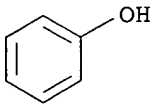


RN 13444-94-5 HCAPLUS
CN Palladium bromide (PdBr2) (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2**, **Phenol**, reactions **630-08-0**, **Carbon monoxide**, reactions **7782-44-7**, **Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)

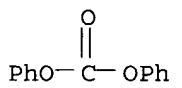
(in production of di-Ph **carbonate** by oxidative carbonylation)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(production of di-Ph carbonate by oxidative carbonylation)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:466746 HCAPLUS
DOCUMENT NUMBER: 137:33682
TITLE: A method for production of diaryl carbonates by oxidative carbonylation with removal of undesired water during the reaction
INVENTOR(S): Ofori, John Yaw; Pressman, Eric James; Shalyaev, Kirill Vladimirovich; Williams, Eric Douglas; Battista, Richard Anthony
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp., Cont.-in-part of U.S. Ser. No. 736,751, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

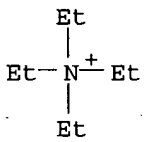
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2002077496 A1 20020620 US 2001-961745 20010924 <--
US 6521777 B2 20030218
WO 2002048087 A2 20020620 WO 2001-US43496 20011114 <--
WO 2002048087 A3 20030213
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
AU 2002016685 A5 20020624 AU 2002-16685 20011114 <--
DE 10197050 T 20040429 DE 2001-10197050 20011114
JP 2004521094 T2 20040715 JP 2002-549623 20011114
PRIORITY APPLN. INFO.: US 2000-736751 B2 20001214
US 2001-961745 A 20010924
WO 2001-US43496 W 20011114

AB The method comprises: (1) contacting at least one aromatic hydroxy compound with **carbon monoxide** and **oxygen** in the presence of a catalyst composition (I), (2) removing a liquid stream (L) from the agitating reaction mixture in a vessel, and transferring L to a first disengagement vessel without agitating, (3) transferring L then to a flash vessel to remove the majority of water under reduced pressure, (4) returning at least a portion of a dried L back to the reaction vessel, wherein at least a portion of diaryl carbonate is recovered from L either before or after water removal and I contains: (A) at least one metal having an atomic number ≥44 from Group 8, 9, or 10, (B) at least one guanidinium salt or onium salt, (C) at least one metal cocatalyst, and (D) at least one **base.**

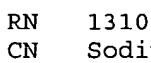
IT **71-91-0**, Tetraethylammonium bromide **1310-73-2**, **Sodium hydroxide**, uses **13444-94-5**, Palladium bromide
RL: CAT (Catalyst use); USES (Uses)
(in production of di-Ph carbonate by oxidative carbonylation)

RN 71-91-0 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)



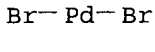
● Br^-

RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

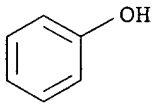


RN 13444-94-5 HCAPLUS

CN Palladium bromide (PdBr2) (7CI, 8CI, 9CI) (CA INDEX NAME)

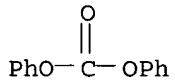


IT **108-95-2**, **Phenol**, reactions **630-08-0**,
Carbon monoxide, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(in production of di-Ph **carbonate** by oxidative carbonylation)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(production of di-Ph carbonate by oxidative carbonylation)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



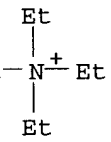
L29 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:466745 HCAPLUS
DOCUMENT NUMBER: 137:33681
TITLE: A method for removal of undesired water from oxidative carbonylation in production of diaryl carbonates
INVENTOR(S): Ofori, John Yaw; Pressman, Eric James; Shalyaev, Kirill Vladimirovich; Williams, Eric Douglas; Battista, Richard Anthony
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2002077495 A1 20020620 US 2000-736872 20001214 <--
PRIORITY APPLN. INFO.: US 2000-736872 20001214
AB The method comprises: (1) contacting at least one aromatic hydroxy compound with **carbon monoxide** and **oxygen** in the presence of a catalyst composition (I), (2) removing a liquid stream (L) from the reaction vessel, (3) transferring L to a flash vessel to remove the majority of water under reduced pressure, and (4) returning at least a portion of a dried L back to the reaction vessel, wherein at least a portion of diaryl carbonate is recovered from L either before or after water removal and I contains: (A) at least one metal having an atomic number ≥44 from Group 8, 9, or 10, (B) at least one guanidinium salt or onium salt, (C) at least one metal cocatalyst, and (D) at least one **base.**

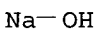
IT **71-91-0**, Tetraethylammonium bromide **1310-73-2**, **Sodium hydroxide**, uses **13444-94-5**, Palladium bromide
RL: CAT (Catalyst use); USES (Uses)
(in production of di-Ph carbonate by oxidative carbonylation)

RN 71-91-0 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)

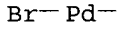


● Br^-

RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

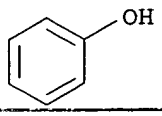


RN 13444-94-5 HCAPLUS
CN Palladium bromide (PdBr2) (7CI, 8CI, 9CI) (CA INDEX NAME)



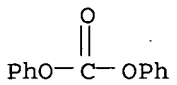
IT **108-95-2**, **Phenol**, reactions **630-08-0**, **Carbon monoxide**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(in production of di-Ph **carbonate** by oxidative carbonylation)

RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(production of di-Ph carbonate by oxidative carbonylation)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:428851 HCAPLUS
DOCUMENT NUMBER: 137:7789
TITLE: Method and catalyst system for producing aromatic carbonates by carbonylation of aromatic hydroxy compounds
INVENTOR(S): Shalyaev, Kirill Vladimirovich; Soloveichik, Grigorii Lev; Johnson, Bruce Fletcher
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002044122	A2	20020606	WO 2001-US50668	20011019 <--
WO 2002044122	A3	20020906		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002099235	A1	20020725	US 2000-728224	20001130 <--
US 6566295	B2	20030520		

AU 2002034135	A5	20020611	AU 2002-34135	20011019 <--
DE 10196977	T	20040422	DE 2001-10196977	20011019
JP 2004535267	T2	20041125	JP 2002-546492	20011019
US 2002183539	A1	20021205	US 2002-151334	20020520 <--
US 6512134	B2	20030128		
PRIORITY APPLN. INFO.:			US 2000-728224 A	20001130
			WO 2001-US50668 W	20011019

AB The method comprises by reacting ≥1 aromatic hydroxy compound (e.g., phenol) with **oxygen** and **carbon monoxide** in the presence of a carbonylation catalyst system containing ≥1 Group 8, 9 or 10 metal source (e.g., palladium acetylacetonate), ≥1 bromide composition (e.g., sodium bromide), ≥1 activating organic solvent (e.g., tetraglyme), a combination of inorg. cocatalysts comprising ≥1 titanium source (e.g., titanium oxide acetylacetonate) and ≥1 copper source (e.g., copper acetylacetonate) and ≥1 **base** (e.g., **sodium hydroxide**) to form an aromatic carbonate (e.g., aromatic carbonate).

IT **1310-73-2**, **Sodium hydroxide**, uses
7647-15-6, Sodium bromide, uses
RL: CAT (Catalyst use); USES (Uses)
(method and catalyst system for producing aromatic carbonates by carbonylation of aromatic hydroxy compds.)

RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

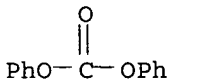
Na—OH

RN 7647-15-6 HCAPLUS
CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)

Br—Na

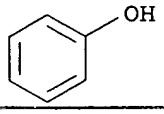
IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(method and catalyst system for producing aromatic carbonates by carbonylation of aromatic hydroxy compds.)

RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2**, **Phenol**, reactions **630-08-0**, **Carbon monoxide**, reactions **7782-44-7**, **Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(method and catalyst system for producing aromatic **carbonates** by carbonylation of aromatic hydroxy compds.)

RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

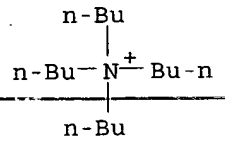
L29 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:129105 HCAPLUS
DOCUMENT NUMBER: 136:183616
TITLE: Reactivation of catalysts and preparation of aromatic carbonates with the reactivated catalysts
INVENTOR(S): Yoshisato, Akinobu; Muramoto, Masaharu; Ban, Tetsuo
PATENT ASSIGNEE(S): Teijin Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002053526	A2	20020219	JP 2000-238250	20000807 <--

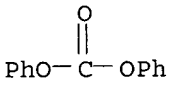
PRIORITY APPLN. INFO.: JP 2000-238250 20000807
OTHER SOURCE(S): CASREACT 136:183616

AB Solid catalysts comprising Pt-group metals, their compds., or their complexes supported on carriers, which have been used in preparation of aromatic carbonates by treatment of aromatic hydroxy compds. with **CO** and O in the presence of quaternary ammonium salts or phosphonium salts and optional **bases**, are reactivated by treating with the aromatic hydroxy compds. (and their mixts. with organic solvents). Thus, PhOH was treated with Bu4NBr, Mn(II) acetylacetonate, and Pd supported on perovskite-type La0.2Pb0.8ZrO3 under **CO** and O at 80° and 10 bar for 3 h to give 15.8% di-Ph carbonate. The catalyst was recovered, washed with PhOH, and reused to show almost the same activity as the fresh catalyst.

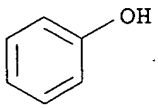
IT **1643-19-2**, Tetrabutylammonium bromide
RL: CAT (Catalyst use); USES (Uses)
(reactivation of catalysts in preparation of aromatic carbonates)
RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(reactivation of catalysts in preparation of aromatic carbonates)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2**, **Phenol**, reactions
RL: NUU (Other use, unclassified); **RCT (Reactant)**; RACT (Reactant or reagent); USES (Uses)
(reactivation of catalysts in preparation of aromatic **carbonates**)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT **630-08-0**, **Carbon monoxide**, reactions
7782-44-7, **Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reactivation of catalysts in preparation of aromatic **carbonates**)
RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

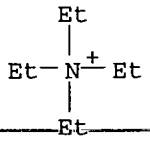
RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

L29 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:111542 HCAPLUS
DOCUMENT NUMBER: 134:149297
TITLE: Carbonylation method and catalyst system for producing aromatic carbonates from hydroxyaromatic compounds, **oxygen** and **carbon monoxide**
INVENTOR(S): Patel, Ben Purushotam; Soloveichik, Grigorii Lev; Whisenhunt, Donald Wayne, Jr.; Shalyaev, Kirill Vladimirovich
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6187942	B1	20010213	US 2000-517000	20000301 <--
US 2001031888	A1	20011018	US 2000-729123	20001204 <--
US 6355824	B2	20020312		
WO 2001064617	A1	20010907	WO 2001-US839	20010111 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1263710	A1	20021211	EP 2001-955099	20010111 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003525262	T2	20030826	JP 2001-563461	20010111 <--
PRIORITY APPLN. INFO.:			US 2000-517000	A3 20000301
			WO 2001-US839	W 20010111

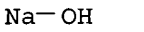
AB Aromatic hydroxy compds. (e.g., phenol) are carbonylated into diaryl carbonates (e.g., di-Ph carbonate) by contacting them with **oxygen** and **carbon monoxide** in the presence of a carbonylation catalyst system comprising an iron compound (e.g., ferrous acetate) as the primary catalyst component, and an inorg. cocatalyst (e.g., tetraethylammonium chloride). This process does not use costly platinum-group metal compound catalysts; a process flow diagram is presented.

IT **71-91-0**, Tetraethylammonium bromide **1310-73-2**, **Sodium hydroxide**, uses
RL: CAT (Catalyst use); USES (Uses)
(carbonylation cocatalysts for producing aromatic carbonates from hydroxyarom. compds., **oxygen** and **carbon monoxide**)
RN 71-91-0 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)

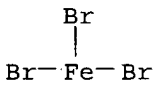


● Br^-

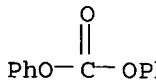
RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)



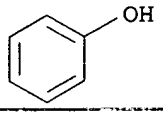
IT **10031-26-2**, Ferric bromide
RL: CAT (Catalyst use); USES (Uses)
(carbonylation method and catalyst system for producing aromatic carbonates from hydroxyarom. compds. and **oxygen** and **carbon monoxide**)
RN 10031-26-2 HCAPLUS
CN Iron bromide (FeBr3) (8CI, 9CI) (CA INDEX NAME)



IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(carbonylation method and catalyst system for producing aromatic carbonates from hydroxyarom. compds. and **oxygen** and **carbon monoxide**)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2**, **Phenol**, reactions **630-08-0**, **Carbon monoxide**, reactions **7782-44-7**, **Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(carbonylation method and catalyst system for producing aromatic **carbonates** from hydroxyarom. compds. and **oxygen** and **carbon monoxide**)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:91544 HCAPLUS
DOCUMENT NUMBER: 134:149285
TITLE: Method and catalyst system for producing aromatic carbonates
INVENTOR(S): Patel, Ben Purushotam; Soloveichik, Grigorii Lev; Whisenhunt, Donald Wayne, Jr.; Shalyaev, Kirill Vladimirovich
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6184409	B1	20010206	US 2000-516746	20000301 <--
US 6509489	B1	20030121	US 2000-694444	20001024 <--
WO 2001064618	A1	20010907	WO 2001-US867	20010111 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1261578	A1	20021204	EP 2001-901979	20010111 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003525263	T2	20030826	JP 2001-563462	20010111 <--

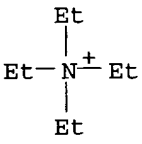
PRIORITY APPLN. INFO.: US 2000-516746 A3 20000301

WO 2001-US867 W 20010111

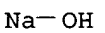
AB The method comprises the step of contacting ≥1 aromatic hydroxy compound with **oxygen** and **CO** in the presence of a carbonylation catalyst system having an effective amount of a nickel source as the primary catalyst component and optionally ≥1 inorg. **co**-catalyst, as well as a **halide** composition and/or a **base** in the absence of a Group VIII B metal source. A process flow diagram is presented.

IT **71-91-0**, Tetraethylammonium bromide **1310-73-2**, **Sodium hydroxide**, uses **14126-37-5**
RL: CAT (Catalyst use); USES (Uses)
(carbonylation process and catalyst system for producing diaryl carbonates from the reaction of **carbon monoxide** and **oxygen** with hydroxyarom. compds.)

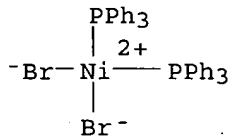
RN 71-91-0 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)



RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

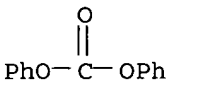


RN 14126-37-5 HCAPLUS
CN Nickel, dibromobis(triphenylphosphine)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

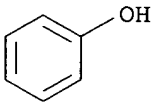


IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(carbonylation process and catalyst system for producing **diaryl carbonates** from the reaction of **carbon monoxide** and **oxygen** with hydroxyarom. compds.)

RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2**, **Phenol**, reactions **630-08-0**,
Carbon monoxide, reactions **7782-44-7**,
Oxygen, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(carbonylation process and catalyst system for producing diaryl **carbonates** from the reaction of **carbon monoxide** and **oxygen** with hydroxyarom. compds.)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

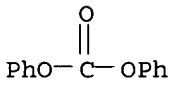
L29 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:45205 HCAPLUS
DOCUMENT NUMBER: 134:87919
TITLE: Carbonylation process and catalyst system for producing diaryl carbonates from the reaction of **carbon monoxide** and **oxygen** with hydroxyaromatic compounds
INVENTOR(S): Patel, Ben Purushotam; Soloveichik, Grigorii Lev; Whisenhunt, Donald Wayne, Jr.; Shalyaev, Kirill Vladimirovich
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 6175033	B1	20010116	US 2000-510381		20000222 <--
WO 2001062702	A1	20010830	WO 2000-US29285		20001024 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
EP 1261576	A1	20021204	EP 2000-973807		20001024 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL					
US 6380418	B1	20020430	US 2000-721682		20001127 <--
PRIORITY APPLN. INFO.:			US 2000-510381	A	20000222
			WO 2000-US29285	W	20001024

AB A method of carbonylating aromatic hydroxy compds. into a diaryl carbonate (e.g., di-Ph carbonate) comprises reacting at least one aromatic hydroxy compound (e.g., phenol) with **oxygen** and **carbon monoxide** in the presence of a carbonylation catalyst system comprising an effective amount of a manganese source [e.g., manganese(II) acetylacetonate] as a primary catalyst component in the absence of a Group VIIIB metal source, and, optionally in the presence of of a catalytic amount of an inorg. cocatalyst [e.g., lead(II) oxide] as well as a **halide** composition (e.g., tetraethylammonium bromide), and/or a **base.** A process flow diagram is presented.

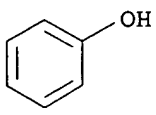
IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(carbonylation process and catalyst system for producing **diaryl carbonates** from the reaction of **carbon monoxide** and **oxygen** with hydroxyarom. compds.)

RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



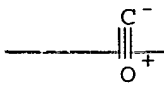
IT **108-95-2**, **Phenol**, reactions **630-08-0**, **Carbon monoxide**, reactions **7782-44-7**, **Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(carbonylation process and catalyst system for producing diaryl **carbonates** from the reaction of **carbon monoxide** and **oxygen** with hydroxyarom. compds.)

RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



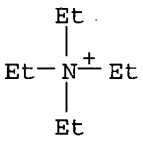
RN 630-08-0 HCAPLUS

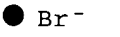
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

IT **71-91-0**, Tetraethylammonium bromide **1310-73-2**, **Sodium hydroxide**, uses
RL: CAT (Catalyst use); USES (Uses)
(in a carbonylation catalyst system for producing diaryl carbonates from the reaction of **carbon monoxide** and **oxygen** with hydroxyarom. compds.)
RN 71-91-0 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)





RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:45204 HCAPLUS
DOCUMENT NUMBER: 134:87918
TITLE: Carbonylation method and catalysts system for producing diaryl carbonates from the reaction of **carbon monoxide** with **oxygen** and hydroxyaromatic compounds
INVENTOR(S): Patel, Ben Purushotam; Soloveichik, Grigorii Lev; Whisenhunt, Donald Wayne, Jr.; Shalyaev, Kirill Vladimirovich
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent

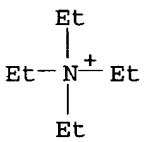
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6175032	B1	20010116	US 2000-510380	20000222 <--
US 6323358	B1	20011127	US 2000-665605	20000920 <--
WO 2001062703	A1	20010830	WO 2000-US29312	20001024 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1261577	A1	20021204	EP 2000-973814	20001024 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003523987	T2	20030812	JP 2001-561713	20001024 <--
PRIORITY APPLN. INFO.:			US 2000-510380	A3 20000222
			WO 2000-US29312	W 20001024

AB Diaryl carbonates (e.g., di-Ph carbonate) are prepared by contacting at least one aromatic hydroxy compound (e.g., phenol) with **oxygen** and **carbon monoxide** in the presence of a carbonylation catalyst system having an effective amount of a cobalt source [e.g., cobalt(III) acetylacetonate] as a primary catalyst component and, optionally, at least one inorg. cocatalyst [e.g., copper(II) acetylacetonate], as well as a **halide** composition (e.g., tetraethylammonium bromide) and/or **base.**

IT **71-91-0**, Tetraethylammonium bromide
RL: CAT (Catalyst use); USES (Uses)
(carbonylation method and catalysts system for producing diaryl carbonates from the reaction of **carbon monoxide** with **oxygen** and hydroxyarom. compds.)

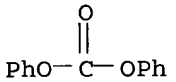
RN 71-91-0 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)



● Br^-

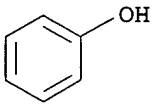
IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(carbonylation method and catalysts system for producing **diaryl carbonates** from the reaction of **carbon monoxide** with **oxygen** and hydroxyarom. compds.)

RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions 630-08-0,
Carbon monoxide, reactions **7782-44-7**,
Oxygen, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(carbonylation method and catalysts system for producing diaryl **carbonates** from the reaction of **carbon monoxide** with **oxygen** and hydroxyarom. compds.)

RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:769987 HCAPLUS
DOCUMENT NUMBER: 128:23258
TITLE: Process and catalysts for the preparation of diaryl carbonates from hydroxyaromatic compounds and **carbon monoxide-oxygen** gas mixtures
INVENTOR(S): Buysch, Hans-Josef; Hesse, Carsten; Rechner, Johann
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 9 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19619949	A1	19971120	DE 1996-19619949	19960517 <--

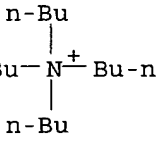
US 5856554	A	19990105	US 1997-853516	19970509 <--
EP 807619	A1	19971119	EP 1997-107407	19970512 <--
EP 807619	B1	20020911		
R: BE, DE, ES, FR, GB, IT, NL				
JP 10045674	A2	19980217	JP 1997-135803	19970512 <--
ES 2181946	T3	20030301	ES 1997-107407	19970512 <--

PRIORITY APPLN. INFO.: DE 1996-19619949 A 19960517
OTHER SOURCE(S): MARPAT 128:23258

AB Diaryl carbonates (e.g., di-Ph carbonate) are prepared in high yield, and without the use of phosgene, by the reaction of (un)substituted C6-12 hydroxyarom. compds. (e.g., PhOH) with an O-**CO** gas mixture in the presence of a platinum-group catalyst (e.g., palladium bromide), a **co**-catalyst [e.g., manganese(III) acetylacetonate], a quaternary salt (e.g., Bu4NBr), and a **base** (e.g., PhONa) at 30-200°/1-200 bar in the melt phase and, from the beginning of the reaction, the amount of diaryl carbonate in the reaction mass is maintained at ≥20% (i.e., initially by addition of it to the reaction mixture). A process flow diagram is presented.

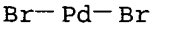
IT **1643-19-2**, Tetrabutylammonium bromide **13444-94-5**, Palladium bromide
RL: CAT (Catalyst use); USES (Uses)
(process and catalysts for the preparation of diaryl carbonates from hydroxyarom. compds. and **carbon monoxide-oxygen** gas mixts.)

RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



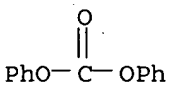
● Br^-

RN 13444-94-5 HCAPLUS
CN Palladium bromide (PdBr2) (7CI, 8CI, 9CI) (CA INDEX NAME)



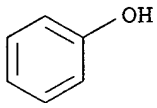
IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(process and catalysts for the preparation of **diaryl carbonates** from hydroxyarom. compds. and **carbon monoxide-oxygen** gas mixts.)

RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2, Phenol**, reactions **630-08-0, Carbon monoxide**, reactions **7782-44-7, Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(process and catalysts for the preparation of diaryl **carbonates** from hydroxyarom. compds. and **carbon monoxide** **oxygen** gas mixts.)

RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

L29 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:145244 HCAPLUS
DOCUMENT NUMBER: 126:144050
TITLE: Preparation of antibiotic and antitumor DC 107 derivatives
INVENTOR(S): Kanda, Yutaka; Saitoh, Yutaka; Saito, Hiromitsu; Ashizawa, Tadashi; Sugiyama, Kazuyo; Gomi, Katsushige; Kakita, Shingo; Takahashi, Yuichi; Murakata, Chikara
PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan
SOURCE: PCT Int. Appl., 149 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

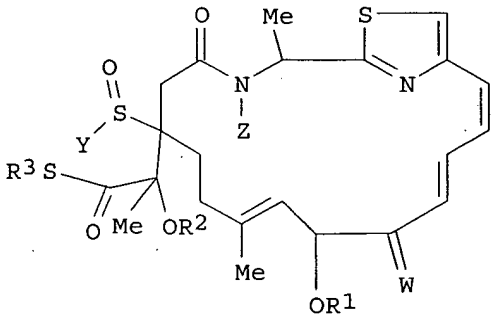
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9700260	A1	19970103	WO 1996-JP1646	19960614 <--
W: AU, CA, CN, HU, JP, KR, NO, NZ, RU, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2197691	AA	19970103	CA 1996-2197691	19960614 <--
AU 9660169	A1	19970115	AU 1996-60169	19960614 <--
AU 705947	B2	19990603		
EP 786462	A1	19970730	EP 1996-917696	19960614 <--
EP 786462	B1	20020918		

R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

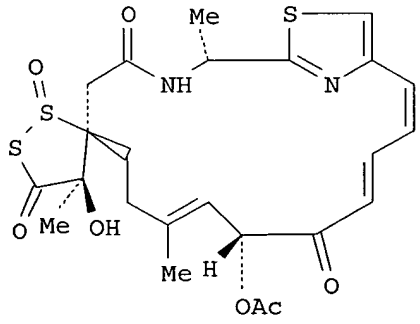
CN 1163616	A	19971029	CN 1996-190920		19960614 <--
AT 224394	E	20021015	AT 1996-917696		19960614 <--
ES 2183958	T3	20030401	ES 1996-917696		19960614 <--
NO 9700675	A	19970416	NO 1997-675		19970214 <--
NO 309570	B1	20010219			
US 5733924	A	19980331	US 1997-776938		19970417 <--
PRIORITY APPLN. INFO.:			JP 1995-150141	A	19950616
			WO 1996-JP1646	W	19960614

OTHER SOURCE(S): MARPAT 126:144050

GI



I



II

AB DC 107 derivs. I [R1 = H, alkoxyalkyl, aralkyloxyalkyl, alkoxyalkoxyalkyl, alkoxyalkoxyalkoxyalkyl, aralkyl, tetrahydropyranyl, COR4, etc.; R2 = H, COR5; R3 = alkyl, alkenyl, (un)substituted aralkyl, etc., R4 = alkyl, etc.; R3 may form a single bond together with Y; Y may form a single bond together with R3 or Z; Z = H or forms a single bond together with Y; W = **oxygen**, NR6, with provisos] and their pharmaceutically acceptable salts are prepared Thus, DC 107 in CH2Cl2 containing pyridine. acetic anhydride, and 4-dimethylaminopyridine was stirred for 1.5 h to give the title compound II. This had an IC50 of 0.52 mg/mL against Staphylococcus aureus.

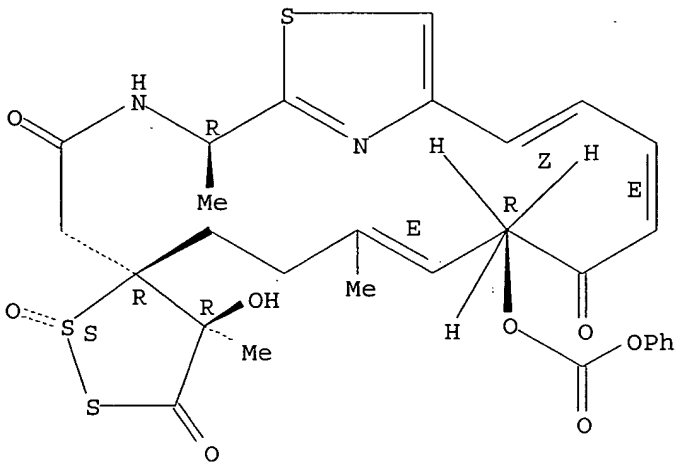
IT **186642-77-3P 186643-18-5P 186643-32-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(preparation of antibiotic and antitumor DC 107 derivs.)

RN 186642-77-3 HCAPLUS

CN Carbonic acid, (2S,2'R,3R,4R,9'E,11'R,13'E,15'Z)-4-hydroxy-2',4,9'-trimethyl-2-oxido-4',5,12'-trioxospiro[1,2-dithiolane-3,6'-

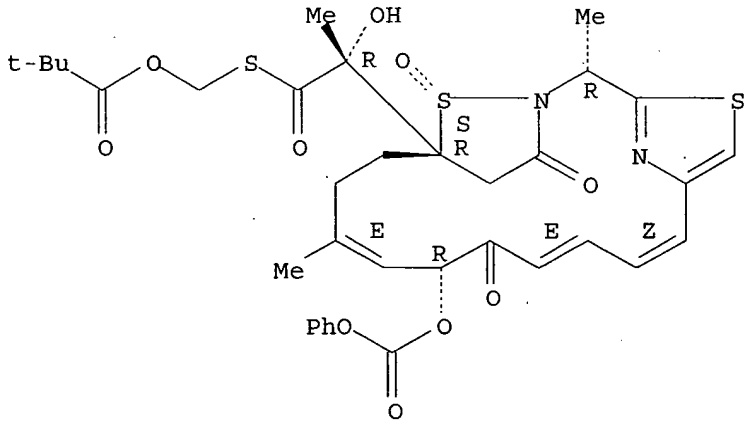
[19]thia[3,20]diazabicyclo[15.2.1]eicosa[1(20),9,13,15,17]pentaen]-11'-yl phenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



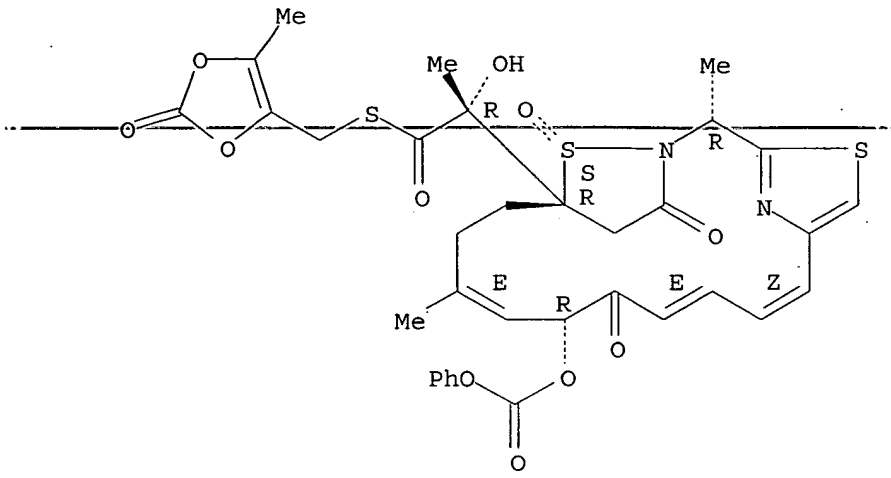
RN 186643-18-5 HCAPLUS
CN Propanoic acid, 2,2-dimethyl-, [[2-[2,14-dimethyl-20-oxido-11,19-dioxo-12-[(phenoxycarbonyl)oxy]-4,20-dithia-1,21-diazatricyclo[15.2.1.13,6]heneicosa-3(21),5,7,9,13-pentaen-17-yl]-2-hydroxy-1-oxopropyl]thio]methyl ester, [2R,7Z,9E,12R,13E,17R(R),20S]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



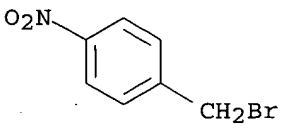
RN 186643-32-3 HCAPLUS
CN 4,20-Dithia-1,21-diazatricyclo[15.2.1.13,6]heneicosa-3(21),5,7,9,13-pentaene-17-ethanethioic acid, α-hydroxy-α,2,14-trimethyl-11,19-dioxo-12-[(phenoxycarbonyl)oxy]-, S-[(5-methyl-2-oxo-1,3-dioxol-4-yl)methyl] ester, 20-oxide, [2R,7Z,9E,12R,13E,17R(R),20S]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.

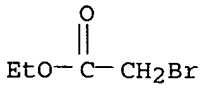


IT **100-11-8**, p-Nitrobenzyl bromide **105-36-2**, Ethyl bromoacetate **106-95-6**, Allyl bromide, reactions **107-30-2**, Chloromethyl methyl **ether 109-92-2 116-11-0 501-53-1**, Benzyl chloroformate **541-41-3**, Ethyl chloroformate **543-27-1**, Isobutyl chloroformate **931-57-7**, 1-Methoxy-1-cyclohexene **1885-14-9**, Phenyl chloroformate **2687-43-6**, O-Benzylhydroxylamine hydrochloride **3188-13-4**, Chloromethyl ethyl **ether 3587-60-8**, Benzyl chloromethyl **ether 3970-21-6 5470-11-1**, Hydroxylamine hydrochloride **28920-43-6**, 9-Fluorenyl methyl chloroformate **39720-27-9**, p-Acetoxybenzyl chloride
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(preparation of antibiotic and antitumor DC 107 derivs.)

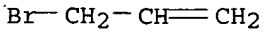
RN 100-11-8 HCAPLUS
CN Benzene, 1-(bromomethyl)-4-nitro- (9CI) (CA INDEX NAME)



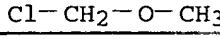
RN 105-36-2 HCAPLUS
CN Acetic acid, bromo-, ethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



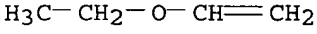
RN 106-95-6 HCAPLUS
CN 1-Propene, 3-bromo- (9CI) (CA INDEX NAME)



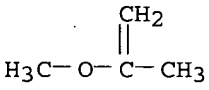
RN 107-30-2 HCAPLUS
CN Methane, chloromethoxy- (9CI) (CA INDEX NAME)



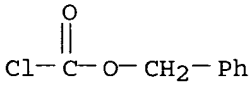
RN 109-92-2 HCAPLUS
CN Ethene, ethoxy- (9CI) (CA INDEX NAME)



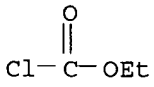
RN 116-11-0 HCAPLUS
CN 1-Propene, 2-methoxy- (9CI) (CA INDEX NAME)



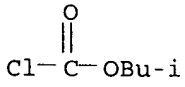
RN 501-53-1 HCAPLUS
CN Carbonochloridic acid, phenylmethyl ester (9CI) (CA INDEX NAME)



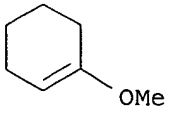
RN 541-41-3 HCAPLUS
CN Carbonochloridic acid, ethyl ester (9CI) (CA INDEX NAME)



RN 543-27-1 HCAPLUS
CN Carbonochloridic acid, 2-methylpropyl ester (9CI) (CA INDEX NAME)

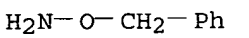


RN 931-57-7 HCAPLUS
CN Cyclohexene, 1-methoxy- (9CI) (CA INDEX NAME)

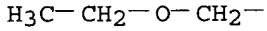


RN 1885-14-9 HCAPLUS
CN Carbonochloridic acid, phenyl ester (9CI) (CA INDEX NAME)

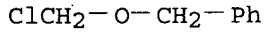
RN 2687-43-6 HCAPLUS
CN Hydroxylamine, O-(phenylmethyl)-, hydrochloride (9CI) (CA INDEX NAME)



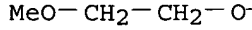
RN 3188-13-4 HCAPLUS
CN Ethane, (chloromethoxy)- (9CI) (CA INDEX NAME)



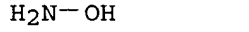
RN 3587-60-8 HCAPLUS
CN Benzene, [(chloromethoxy)methyl]- (9CI) (CA INDEX NAME)



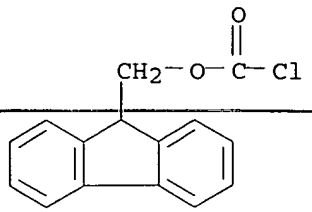
RN 3970-21-6 HCAPLUS
CN Ethane, 1-(chloromethoxy)-2-methoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)



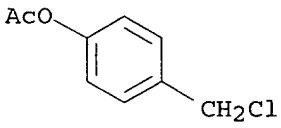
RN 5470-11-1 HCAPLUS
CN Hydroxylamine, hydrochloride (8CI, 9CI) (CA INDEX NAME)



RN 28920-43-6 HCAPLUS
CN Carbonochloridic acid, 9H-fluoren-9-ylmethyl ester (9CI) (CA INDEX NAME)



RN 39720-27-9 HCAPLUS
CN Phenol, 4-(chloromethyl)-, acetate (9CI) (CA INDEX NAME)



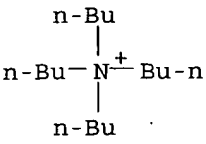
L29 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:121321 HCAPLUS
DOCUMENT NUMBER: 126:131251
TITLE: Process and catalysts for the continuous preparation of diaryl carbonates from hydroxyl group-substituted aromatic compounds
INVENTOR(S): Buysch, Hans-Josef; Hesse, Carsten; Rechner, Johann
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 749955	A1	19961227	EP 1996-109317	19960611 <--
EP 749955	B1	20000816		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
DE 19523390	A1	19970109	DE 1995-19523390	19950623 <--
US 5625091	A	19970429	US 1996-662431	19960610 <--
ES 2151108	T3	20001216	ES 1996-109317	19960611 <--
JP 09012513	A2	19970114	JP 1996-177169	19960619 <--
CA 2179581	AA	19961224	CA 1996-2179581	19960620 <--
CN 1143071	A	19970219	CN 1996-107161	19960621 <--
CN 1119315	B	20030827		

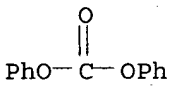
PRIORITY APPLN. INFO.: DE 1995-19523390 A 19950623
OTHER SOURCE(S): MARPAT 126:131251

AB The title compds., RO2COR [R = (un)substituted C6-12 aryl] (e.g., di-Ph carbonate), are prepared in a continuous process by the carbonylation of hydroxyl group-substituted aromatic compds. ROH (e.g., PhOH) with **CO** and **O2** in the presence of a Pt-Group metal catalyst (e.g., Pd bromide), a **Co** catalyst, a quaternary salt (e.g., Bu4NBr), and a **base** (e.g., PhONa) at 30-200°/1-200 bar, followed by removal of the reaction water under reduced pressure. Process flow diagrams are presented.

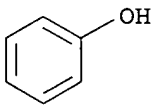
IT **1643-19-2**, Tetrabutylammonium bromide
RL: CAT (Catalyst use); USES (Uses)
(process and catalysts for the continuous preparation of diaryl carbonates from hydroxyl group-substituted aromatic compds.)
RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(process and catalysts for the continuous preparation of **diaryl carbonates** from hydroxyl group-substituted aromatic compds.)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2**, **Phenol**, reactions **630-08-0**, **Carbon monoxide**, reactions **7782-44-7**, **Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(process and catalysts for the continuous preparation of diaryl **carbonates** from hydroxyl group-substituted aromatic compds.)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

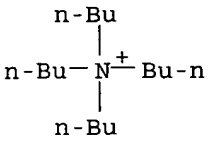
O=O

L29 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:57544 HCAPLUS
DOCUMENT NUMBER: 126:89872
TITLE: Synthesis and characterization of aromatic and brominated aromatic polycarbonates by two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate
AUTHOR(S): Liaw, Der-Jang; Chang, Ping
CORPORATE SOURCE: Dep. Chem. Eng., Natl. Taiwan Inst. Technol., Taipei, 106, Taiwan
SOURCE: Journal of Applied Polymer Science (**1997**), 63(2), 195-204
CODEN: JAPNAB; ISSN: 0021-8995
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Aromatic and brominated aromatic homo polycarbonates were synthesized by the two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate at 25°C. The IR spectra, inherent viscosity, x-ray diffraction, solubility, contact angle, differential scanning calorimetry, thermogravimetric anal., and limiting **oxygen** index (LOI) of all polycarbonates were measured. Polycarbonates of moderate or large molar mass with inherent viscosities up to 0.77 dL/g were obtained in high yields with tetrabutylammonium bromide (TBAB) as a catalyst, **sodium hydroxide** as a **base**, and 1,2-dichloroethane as solvent. The brominated polycarbonates have good flame retardancy, as indicated by LOI values. The x-ray diffraction diagram showed that all polycarbonates were semicryst. The polycarbonate (PC-2) based on bisphenol S has greater crystallinity than the others because of the sulfonyl group, which has a small van der Waals radius. The incorporation of the bromine atoms (PC-4-PC-6) on the ring decreased the crystallinity. Almost all polymers were soluble in DMF, pyridine, and phenol, but insol. in acetone and m-cresol. Solubility increased remarkably with bromine substitution. The contact angles of polycarbonates (PC-1-PC-3) lie in the of range 82 to 97 degrees greater than that of brominated polycarbonates (PC-4-PC-6). The wettability of the homo polycarbonate based on bisphenol S is greater than that of polycarbonates-derived from bisphenol A and bisphenol AF. Tg of polycarbonates lies in the range 141-206ÅC, although Tg of polycarbonate based on bisphenol S was not detected Tg of brominated polycarbonates was remarkably greater than that of unbrominated polycarbonates. These polymers obtained from aromatic bisphenols lost no mass below 341°C, but 10% loss of mass was recorded above 396°C in nitrogen.

IT **1643-19-2**, Tetrabutylammonium bromide **5197-95-5**, Benzyltriethylammonium bromide
RL: CAT (Catalyst use); USES (Uses)
(synthesis and characterization of aromatic and brominated aromatic polycarbonates by two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate)

RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



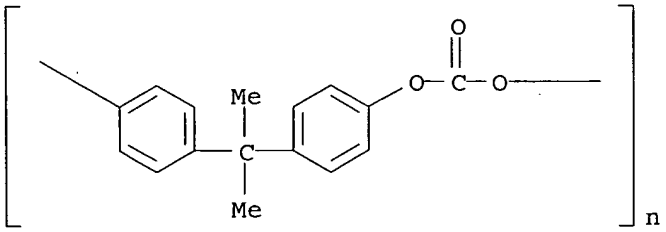
● Br^-

RN 5197-95-5 HCAPLUS
CN Benzenemethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)

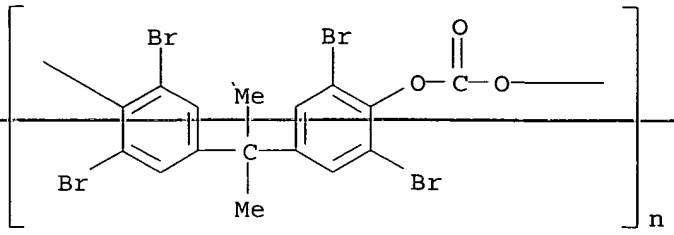
● Br^-

IT **24936-68-3P**, preparation **28774-93-8P**, 3,3',5,5'-Tetrabromobisphenol A-trichloromethyl chloroformate copolymer, sru **28930-33-8P**, Bisphenol S-trichloromethyl chloroformate copolymer, sru **32291-26-2P**, Bisphenol AF-trichloromethyl chloroformate copolymer, sru **56912-08-4P**, 3,3',5,5'-Tetrabromobisphenol S-trichloromethyl chloroformate copolymer, sru **126430-95-3P**, 3,3',5,5'-Tetrabromobisphenol AF-trichloromethyl chloroformate copolymer, sru
RL: PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**
(synthesis and characterization of aromatic and brominated aromatic polycarbonates by two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate)

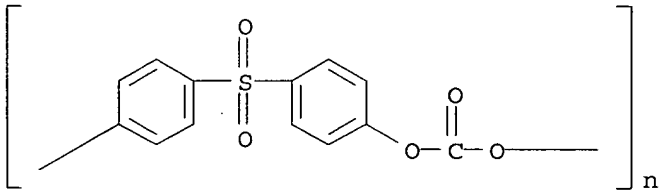
RN 24936-68-3 HCAPLUS
CN Poly[oxycarbonyloxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene] (9CI) (CA INDEX NAME)



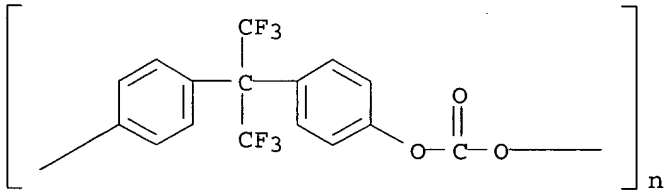
RN 28774-93-8 HCAPLUS
CN Poly[oxycarbonyloxy(2,6-dibromo-1,4-phenylene)(1-methylethylidene)(3,5-dibromo-1,4-phenylene)] (9CI) (CA INDEX NAME)



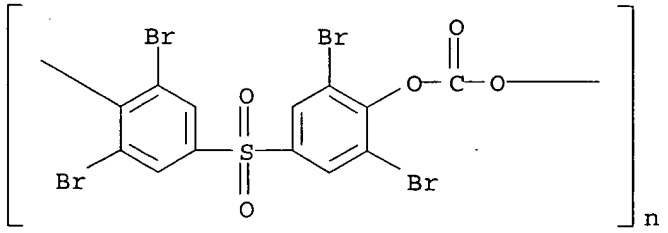
RN 28930-33-8 HCAPLUS
CN Poly(oxycarbonyloxy-1,4-phenylenesulfonyl-1,4-phenylene) (9CI) (CA INDEX NAME)



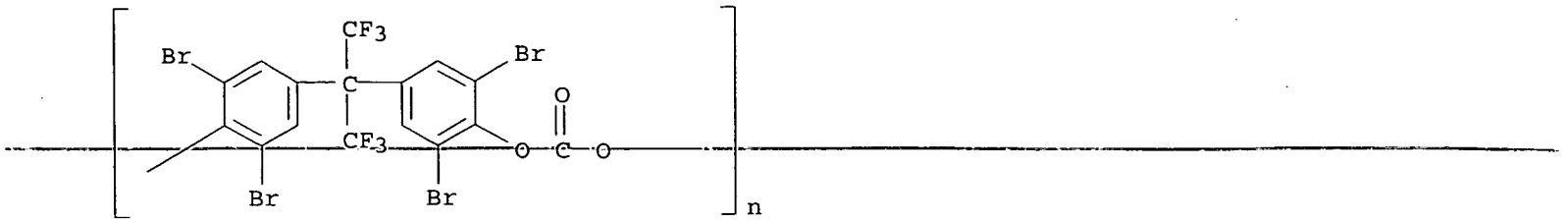
RN 32291-26-2 HCAPLUS
CN Poly[oxycarbonyloxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)



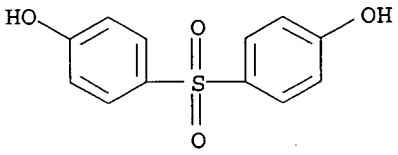
RN 56912-08-4 HCAPLUS
CN Poly[oxycarbonyloxy(2,6-dibromo-1,4-phenylene)sulfonyl(3,5-dibromo-1,4-phenylene)] (9CI) (CA INDEX NAME)



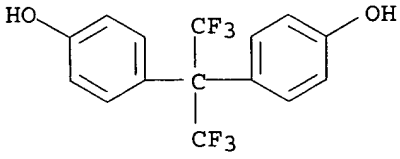
RN 126430-95-3 HCAPLUS
CN Poly[oxycarbonyloxy(2,6-dibromo-1,4-phenylene)[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene](3,5-dibromo-1,4-phenylene)] (9CI) (CA INDEX NAME)



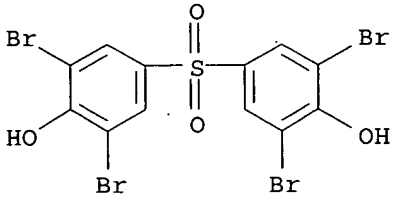
IT **80-09-1 1478-61-1**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(synthesis and characterization of aromatic and brominated aromatic polycarbonates by two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate)
RN 80-09-1 HCAPLUS
CN Phenol, 4,4'-sulfonylbis- (9CI) (CA INDEX NAME)



RN 1478-61-1 HCAPLUS
CN Phenol, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis- (9CI) (CA INDEX NAME)



IT **39635-79-5P**, 3,3',5,5'-Tetrabromobisphenol S
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and characterization of aromatic and brominated aromatic polycarbonates by two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate)
RN 39635-79-5 HCAPLUS
CN Phenol, 4,4'-sulfonylbis[2,6-dibromo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

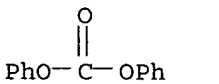
L29 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:674344 HCAPLUS
DOCUMENT NUMBER: 125:300614
TITLE: Process and catalysts for the preparation of diaryl carbonates from aryl alcohols and **carbon monoxide** and **oxygen**
INVENTOR(S): Buysch, Hans-Josef; Hesse, Carsten; Rechner, Johann
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 736511	A1	19961009	EP 1996-104710	19960325 <--
EP 736511	B1	19991027		
R: DE, ES, FR, GB, IT, NL				
DE 19512616	A1	19961010	DE 1995-19512616	19950405 <--
ES 2139269	T3	20000201	ES 1996-104710	19960325 <--
JP 08283206	A2	19961029	JP 1996-95861	19960327 <--
US 5663408	A	19970902	US 1996-623728	19960329 <--

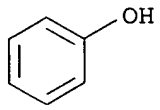
PRIORITY APPLN. INFO.: DE 1995-19512616 A 19950405
OTHER SOURCE(S): MARPAT 125:300614

AB Diaryl carbonates ROCO2R [R = (un)substituted C6-12 aryl] (e.g., di-Ph carbonate) are prepared in high yield and selectivity by the reaction of aryl alcs. ROH (e.g., PhOH) with **CO** and **O2** at 30-200°/2-50 bars in the presence of a quaternary salt (e.g., Bu4NBr), a **base** (e.g., PhONa), a Pt-group metal catalyst (e.g., palladium bromide), and a **co**-catalyst [e.g., activated C and Mn (II) acetylacetonate].

IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(process and catalysts for the preparation of **diaryl carbonates** from aryl alcs. and **carbon monoxide** and **oxygen**)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

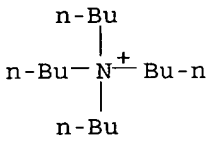


IT **108-95-2**, **Phenol**, reactions **630-08-0**, **Carbon monoxide**, reactions **1643-19-2**, Tetrabutylammonium bromide **7782-44-7**, **Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(process and catalysts for the preparation of diaryl **carbonates** from aryl alcs. and **carbon monoxide** and **oxygen**)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

L29 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:774826 HCAPLUS
DOCUMENT NUMBER: 123:169244
TITLE: Process for continuous preparation of diaryl carbonates
INVENTOR(S): Buysch, Hans-Josef; Hesse, Carsten; Rechner, Johann; Schomaecker, Reinhard; Wagner, Paul; Kaufmann, Dieter Prof Dipl Chem
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4403075	A1	19950803	DE 1994-4403075	19940202 <--
EP 667336	A1	19950816	EP 1995-100787	19950120 <--
EP 667336	B1	19980520		

R: BE, CH, DE, ES, FR, GB, IT, LI, NL

ES 2117808	T3	19980816	ES 1995-100787	19950120 <--
JP 07247243	A2	19950926	JP 1995-31483	19950127 <--
US 5498742	A	19960312	US 1995-379384	19950127 <--
CA 2141391	AA	19950803	CA 1995-2141391	19950130 <--
CN 1112107	A	19951122	CN 1995-101656	19950130 <--
CN 1056365	B	20000913		

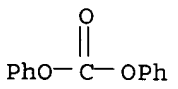
PRIORITY APPLN. INFO.: DE 1994-4403075 A 19940202
OTHER SOURCE(S): CASREACT 123:169244; MARPAT 123:169244

AB Improvements are made in the preparation of diaryl carbonates (RO)2CO [R = (un)substituted C6-12 aryl] by reaction of phenols ROH with **CO** and **O2** in the presence of a **CO**-activated noble metal catalyst (group VIIIb), a cocatalyst, a quaternary salt, and a **base.** In particular, the reaction is conducted with removal of H2O by stripping of the reaction mixture with excess reaction gas. For example, a run was performed at 80° with 450 g PhOH, with PdBr2 as catalyst, Mn(II) acetylacetonate as cocatalyst, NaOPh as **base**, and in the presence of Bu4N+ Br-. The reaction gas was a (95:5) mixture of **CO** and **O2** at 10 bar, introduced at a rate of 400 NL/h. The reaction mixture had a content of 18.6% (PhO)2CO after 3 h, with removal of 8.75 g PhOH-H2O mixture as condensate. In contrast, a non-invention run using only 6 NL/h gas mixture gave only 5.4% (PhO)2CO content in 3 h, with only 0.2 g condensate.

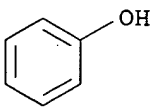
IT **13444-94-5**, Palladium dibromide
RL: CAT (Catalyst use); USES (Uses)
(catalyst; continuous preparation of diaryl carbonates)
RN 13444-94-5 HCAPLUS
CN Palladium bromide (PdBr2) (7CI, 8CI, 9CI) (CA INDEX NAME)

Br—Pd—Br

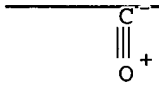
IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(continuous preparation of **diaryl carbonates**)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **108-95-2**, **Phenol**, reactions **630-08-0**, **Carbon monoxide**, reactions **7782-44-7**, **Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reactant; continuous preparation of diaryl **carbonates**)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)

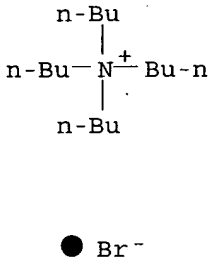


RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

IT **1643-19-2**, Tetrabutylammonium bromide
RL: NUU (Other use, unclassified); USES (Uses)
(reaction component; continuous preparation of diaryl carbonates)
RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



L29 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:652566 HCAPLUS
DOCUMENT NUMBER: 119:252566
TITLE: Manufacture of aromatic carbonates
INVENTOR(S): Joyce, Richard P.; King, Joseph A., Jr.; Pressman, Eric J.
PATENT ASSIGNEE(S): General Electric Co., USA
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

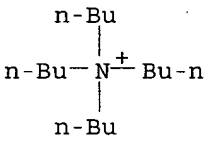
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5231210	A	19930727	US 1992-929749	19920817 <--
EP 583935	A1	19940223	EP 1993-306328	19930811 <--
EP 583935	B1	19961120		
R: DE, ES, FR, GB, IT, NL				
ES 2094485	T3	19970116	ES 1993-306328	19930811 <--
JP 06172268	A2	19940621	JP 1993-202161	19930816 <--
JP 2971297	B2	19991102		

PRIORITY APPLN. INFO.: US 1992-929749 A 19920817

AB The process comprises heating to a temperature of 60-150° a mixture comprising an aromatic hydroxy compound, **CO**, O, and an effective amount of a Pd carbonylation catalyst comprising (a) catalytically active Pd in the metallic or chemical bonded state, (b) an inorg. cocatalyst in the form of a complex of a Co2+ salt and a Schiff **base**, (c) a quaternary ammonium or phosphonium **halide**, and (d) optionally, a terpyridine compound This catalyst combination substantially enhances the production rate as compared to similar catalysts containing Co2+ and Mn3+ salts instead of the Co2+-Schiff **base** complex. An stirred autoclave containing a mixture of PhOH 36.41 and (Bu)4NBr 1.16118 g, and Pd(OAc)2 26.8, terpyridine 9.6, and **Co** di(salicylal)-3,3'-diamino-N-methyldipropylamine (I) 24.6 mg, and (Ph)2O 5.01 g was flushed with **CO** at 400 psi, pressurized with O to 110 psi and with **CO** to 590 psi, and heated at 115° to give Ph2CO3 at 0.35 mol/L.h, vs. 0.17 with **Co**(OAc)2 instead of I.

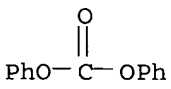
IT **1643-19-2**, Tetrabutylammonium bromide
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for carbonylation of phenols with **carbon monoxide** and **oxygen**)

RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



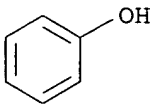
IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(manufacture of, catalysts for)

RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



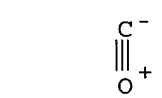
IT **108-95-2**, **Phenol**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with **carbon monoxide** and **oxygen** in manufacture of di-Ph **carbonate**, catalysts for)

RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT **7782-44-7**, **Oxygen**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with **phenol** and **carbon monoxide** in manufacture of aromatic **carbonates**, catalysts for)
RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

IT **630-08-0**, **Carbon monoxide**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with **phenols** and **oxygen** in manufacture of aromatic **carbonates**, catalysts for)
RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



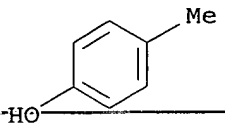
L29 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:449073 HCAPLUS
DOCUMENT NUMBER: 119:49073
TITLE: Preparation of aromatic carbonates
INVENTOR(S): Fujita, Terunori; Kiso, Yoshihisa; Nagata, Takuji; Iwasaki, Hiroshi
PATENT ASSIGNEE(S): Mitsui Petrochemical Industries, Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05025095	A2	19930202	JP 1991-203636	19910719 <--
JP 3014812	B2	20000228		

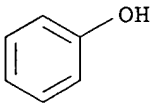
PRIORITY APPLN. INFO.: JP 1991-203636 19910719

AB Aromatic carbonates are prepared by treatment of aromatic hydroxy compds. with **CO** and mol. O in the presence of catalysts comprising (a) Pd and/or Pd compds., (b) **Co** compds., (c) organic and/or inorg. **halides**, and (d) **bases** under pressure and heating. Autoclaving phenol, Pd(OAc)2, **Co**(OPh)2, CsBr, and Cs2CO3 at 100° and **CO** 49, O 25, and CO2 15 kg/cm2 for 3 h gave 4.6% di-Ph carbonate in 96% selectivity, vs. 0.3% and 72%, without CsBr, resp.

IT **106-44-5**, p-**Cresol**, reactions **108-95-2**, **Phenol**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(carbonylation of, with **carbon monoxide** and **oxygen**)
RN 106-44-5 HCAPLUS
CN Phenol, 4-methyl- (9CI) (CA INDEX NAME)



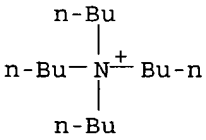
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT **1310-73-2**, **Sodium hydroxide**, uses
1643-19-2, Tetrabutylammonium bromide **7758-02-3**,
Potassium bromide, uses **7787-69-1**, Cesium bromide
RL: USES (Uses)
(catalyst systems containing, in carbonylation of phenols)
RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na—OH

RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



RN 7758-02-3 HCAPLUS
CN Potassium bromide (KBr) (9CI) (CA INDEX NAME)

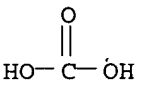
Br—K

RN 7787-69-1 HCAPLUS
CN Cesium bromide (CsBr) (9CI) (CA INDEX NAME)

Br—Cs

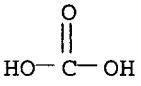
IT **534-17-8**, Cesium **carbonate** **584-08-7**, Potassium

carbonate 584-09-8, Rubidium **carbonate**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(catalyst systems containing, in carbonylation of **phenols**)
RN 534-17-8 HCAPLUS
CN Carbonic acid, dicesium salt (8CI, 9CI) (CA INDEX NAME)



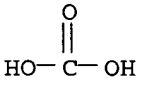
●2 Cs

RN 584-08-7 HCAPLUS
CN Carbonic acid, dipotassium salt (8CI, 9CI) (CA INDEX NAME)



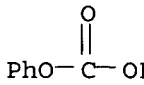
●2 K

RN 584-09-8 HCAPLUS
CN Carbonic acid, dirubidium salt (8CI, 9CI) (CA INDEX NAME)



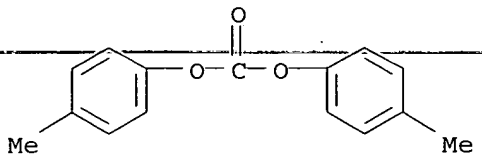
●2 Rb

IT **102-09-0P**, Diphenyl carbonate
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of, from phenol and **carbon monoxide** and **oxygen**)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

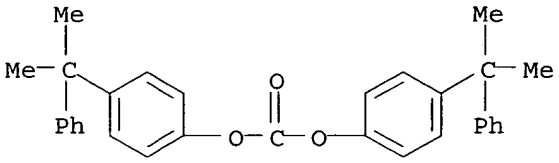


IT **621-02-3P**, Bis(p-tolyl) carbonate **33524-49-1P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of, from phenol derivative and **carbon monoxide** and **oxygen**)
RN 621-02-3 HCAPLUS

CN Carbonic acid, bis(4-methylphenyl) ester (9CI) (CA INDEX NAME)



RN 33524-49-1 HCAPLUS
CN Phenol, 4-(1-methyl-1-phenylethyl)-, carbonate (2:1) (9CI) (CA INDEX NAME)



L29 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1980:604290 HCAPLUS
DOCUMENT NUMBER: 93:204290
TITLE: Aromatic carbonates
INVENTOR(S): Hallgren, John Edward
PATENT ASSIGNEE(S): General Electric Co., USA
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

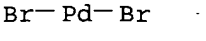
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2949936	A1	19800703	DE 1979-2949936	19791212 <--
GB 2038321	A	19800723	GB 1979-39487	19791114 <--
GB 2038321	B2	19830413		
JP 55102539	A2	19800805	JP 1979-160409	19791212 <--
NL 7908991	A	19800617	NL 1979-8991	19791213 <--
FR 2444024	A1	19800711	FR 1979-30668	19791214 <--
CA 1137102	A1	19821207	CA 1979-342001	19791214 <--

PRIORITY APPLN. INFO.: US 1978-969546 A 19781214

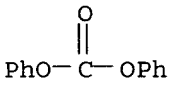
AB Aromatic carbonates are prepared by treating a phenol with an alkanol and **CO** in the presence of a Pd catalyst, a Mn redox cocatalyst, a **base**, and a drying agent. Thus, 4-Me2CHC6H4C6H4OH-4 was treated with EtOH and **CO** in the presence of PdBr2, Mn(CH2Ac2)2, 1,2,2,6,6-pentamethylpiperidine, and activated Linde 3A mol. sieve to give 4-Me2CHC6H4C6H4O2COEt-4, 4-(4-Me2CHC6H4C6H4O)2CO, and (EtO)2CO.

IT **13444-94-5**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(catalyst for reaction of **carbon monoxide** with **phenols** and alkanols)

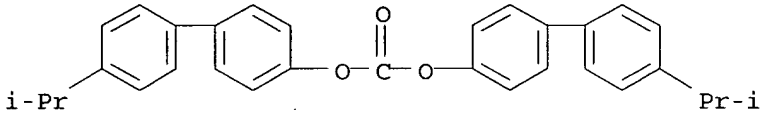
RN 13444-94-5 HCAPLUS
CN Palladium bromide (PdBr2) (7CI, 8CI, 9CI) (CA INDEX NAME)



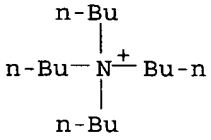
IT **102-09-0P 75422-89-8P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



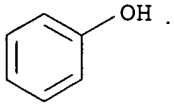
RN 75422-89-8 HCAPLUS
CN [1,1'-Biphenyl]-4-ol, 4'-(1-methylethyl)-, carbonate (2:1) (9CI) (CA INDEX NAME)



IT **1643-19-2**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of **carbon monoxide** with **phenols** and alkanols in presence of)
RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



IT **108-95-2**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with methanol and **carbon monoxide**)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT 630-08-0, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with **phenols** and alkanols, aromatic **carbonates** from)
RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

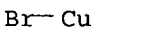
L29 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1980:146429 HCAPLUS
DOCUMENT NUMBER: 92:146429
TITLE: Catalytic preparation of aromatic carbonates
PATENT ASSIGNEE(S): General Electric Co., USA
SOURCE: Fr. Demande, 19 pp. Addn. to Fr. Demande 2,367,731.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2422621	A2	19791109	FR 1978-10542	19780410 <--
FR 2422621	B2	19820122		

PRIORITY APPLN. INFO.: FR 1978-10542 A 19780410

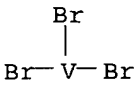
AB Aromatic carbonates were prepared by the reaction of phenols with **CO**, an oxidant and a **base** in the presence of a catalyst chosen from Ru, Rh, Pd, Os, Ir or Pt or their compds. and optionally with one of a variety of metal compound cocatalysts. Thus, p-PhCMe2C6H4OH treated 44 h with **CO** in the presence of 1,2,2,6,6-pentamethylpiperidine, PdBr2 and Mn(ON:CPhCHPhOH)2 gave 96% conversion of phenol with formation of 95 mol carbonate per mol PdBr2. With bisphenol A the polycarbonate was formed.

IT **7787-70-4 13446-03-2 13470-26-3**
RL: CAT (Catalyst use); USES (Uses)
(catalyst, for oxidative reaction of phenols with **carbon monoxide**)
RN 7787-70-4 HCAPLUS
CN Copper bromide (CuBr) (8CI, 9CI) (CA INDEX NAME)

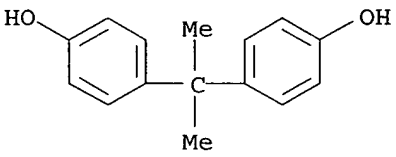


RN 13446-03-2 HCAPLUS
CN Manganese bromide (MnBr2) (6CI, 8CI, 9CI) (CA INDEX NAME)

RN 13470-26-3 HCAPLUS
CN Vanadium bromide (VBr3) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

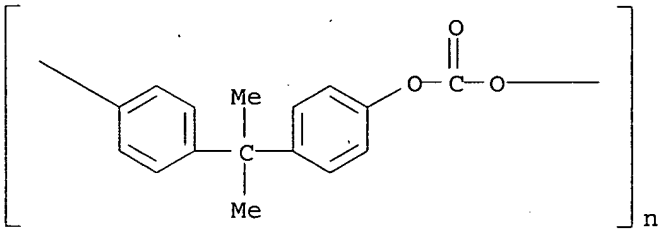


IT **80-05-7**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(oxidative reaction of, with **carbon monoxide**, polycarbonates by)
RN 80-05-7 HCAPLUS
CN Phenol, 4,4'-(1-methylethylidene)bis- (9CI) (CA INDEX NAME)

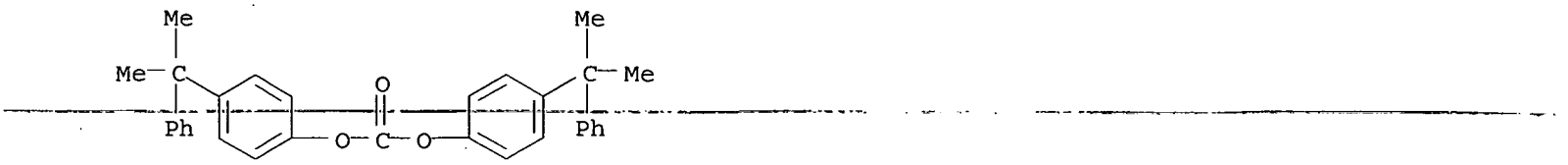


IT **630-08-0**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(oxidative reaction of, with **phenols**, aromatic **carbonates** by)
RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

IT **24936-68-3P**, preparation **33524-49-1P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 24936-68-3 HCAPLUS
CN Poly[oxycarbonyloxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene] (9CI) (CA INDEX NAME)

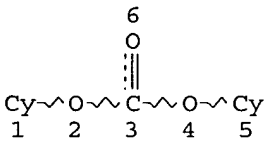


RN 33524-49-1 HCAPLUS
CN Phenol, 4-(1-methyl-1-phenylethyl)-, carbonate (2:1) (9CI) (CA INDEX NAME)



=> □

=> d stat que
L1 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

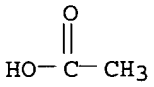
STEREO ATTRIBUTES: NONE

L2	6856	SEA FILE=REGISTRY SSS FUL L1
L3	125595	SEA FILE=REGISTRY ABB=ON PLU=ON ACTIVATING(W)SOLVENT OR ETHER? OR SULFONE? OR NITRILES OR AMIDES OR CARBONATE? OR POLYETHER? OR DIGLYME OR TRIGLYME OR TETRAGLYME
L4	1255	SEA FILE=REGISTRY ABB=ON PLU=ON SOLVENT OR SOLVENTS
L5	95	SEA FILE=REGISTRY ABB=ON PLU=ON NITRILE?/CN
L6	786	SEA FILE=REGISTRY ABB=ON PLU=ON AMIDE?/CN
L7	16418	SEA FILE=REGISTRY ABB=ON PLU=ON PHENOLIC OR CRESOL OR 4-FLUOROPHENOL?/CN OR BISPHENOL A?/CN OR METHYL SALICYLATE?/CN
L8	1	SEA FILE=REGISTRY ABB=ON PLU=ON PHENOL/CN
L9	24018	SEA FILE=HCAPLUS ABB=ON PLU=ON L2 OR DIARYL(W)CARBONATE
L10	2183760	SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR L4 OR L5 OR L6 OR ACTIVATING(W)SOLVENT OR ETHER? OR SULFONE? OR NITRILE OR AMIDE OR CARBONATE? OR POLYETHER? OR DIGLYME OR TRIGLYME OR TETRAGLYME
L11	570160	SEA FILE=HCAPLUS ABB=ON PLU=ON L7 OR L8 OR PHENOLIC OR CRESOL OR 4(W)FLUOROPHENOL? OR BISPHENOL(W)A OR METHYL(W) SALICYLATE? OR PHENOL
L12	5461	SEA FILE=HCAPLUS ABB=ON PLU=ON L9(L)PREPARATION/RL
L13	335274	SEA FILE=HCAPLUS ABB=ON PLU=ON REACTANT/RL(L)L10
L14	65329	SEA FILE=HCAPLUS ABB=ON PLU=ON REACTANT/RL(L)L11
L15	677	SEA FILE=HCAPLUS ABB=ON PLU=ON L12 AND L13 AND L14
L16	101866	SEA FILE=REGISTRY ABB=ON PLU=ON PALLADIUM OR ACETYLACETONATE
L17	19213	SEA FILE=REGISTRY ABB=ON PLU=ON CARBON MONOXIDE?/CN OR OXYGEN
L19	17811	SEA FILE=REGISTRY ABB=ON PLU=ON (TETRAMETHYLAMMONIUM OR TETRAMETHYL(L)AMMONIUM OR PHOSPHONIUM OR AMMONIUM OR LITHIUM OR SODIUM OR POTASSIUM)(L)HYDROXIDE OR (AMINE OR TRIETHYLAMIN

```
               E OR TRIALKYLAMINE)(L)HYDRATE
L20       165455 SEA FILE=REGISTRY ABB=ON  PLU=ON  HALIDE OR BROMIDE OR
               (LITHIUM OR MAGNESIUM)(L)BROMIDE OR (AMMONIUM OR PHOSPHONIUM)(W
               )HALIDE OR ALKALI METAL?/CN
L22       197938 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L16 OR PALLADIUM OR ACETYLACET
               ONATE
L23      1846505 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 OR CARBON(W)MONOXIDE OR
               CO OR OXYGEN OR O2
L24       904208 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19 OR BASE OR (PHOSPHONIUM
               OR ?AMMONIUM OR LITHIUM OR SODIUM OR POTASSIUM)(3A)HYDROXIDE
               OR ?AMINE(5A) HYDRATE
L25       565021 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 OR HALIDE OR BROMIDE
               ALKALI(W)METAL?
L26       243271 SEA FILE=REGISTRY ABB=ON  PLU=ON  COPPER?/CN
L27       170458 SEA FILE=REGISTRY ABB=ON  PLU=ON  TITANIUM
L28           25 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 AND L23 AND L24 AND L25
L29           24 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 AND PD=<OCTOBER 14, 2003
L30           38 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 AND L14 AND L23 AND L22
               AND L24 AND L25
L31           18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 NOT L29
L32            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND (L26 OR L27 OR
               CO(W)CATALY?)
L33            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L32 OR L28) NOT L29


=>
=>

=> d ibib abs hitstr l33 1-5

L33  ANSWER 1 OF 5  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2005:406839  HCAPLUS
                            Correction of: 2005:155216
                            Correction of: 142:197768
TITLE:                    Product class 1: pyridines
AUTHOR(S):                Spitzner, D.
CORPORATE SOURCE:         Germany
SOURCE:                   Science of Synthesis (2005), 15, 11-284
                          CODEN: SSCYJ9
PUBLISHER:                Georg Thieme Verlag
DOCUMENT TYPE:            Journal; General Review
LANGUAGE:                 English
AB   A review of methods to prepare pyridines, pyridine-1-oxides, and pyridinium
     salts.  Methods include cyclization, ring transformations, aromatization
     and substituent modification.
IT   INDEXING IN PROGRESS
IT   142-71-2 506-68-3, Cyanogen bromide ((CN)Br)
     506-96-7, Acetyl bromide 544-92-3, Copper cyanide
     (Cu(CN)) 576-83-0 1310-65-2, Lithium
     hydroxide (Li(OH)) 1336-21-6, Ammonium
     hydroxide ((NH4)(OH)) 1643-19-2 2857-97-8
     3375-31-3 5470-11-1 7550-35-8, Lithium bromide
     (LiBr) 7550-45-0, Titanium chloride (TiCl4) (T-4)-
     7647-10-1, Palladium chloride (PdCl2) 7647-15-6
     , Sodium bromide (NaBr) 7699-45-8, Zinc bromide (ZnBr2)
     7720-78-7 7727-15-3, Aluminum bromide (AlBr3)
     7758-89-6, Copper chloride (CuCl) 7789-47-1, Mercury
     bromide (HgBr2) 7789-59-5, Phosphoric tribromide
     10028-15-6, Ozone 10035-10-6, Hydrobromic acid
     13965-03-2 14221-01-3 26323-01-3
```

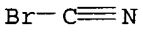
29964-62-3 51364-51-3
RL: CAT (Catalyst use); USES (Uses)
(review of preparation of pyridines, pyridine-1-oxides and pyridinium salts via cyclization, ring transformations, aromatization and substituent modification)

RN 142-71-2 HCAPLUS
CN Acetic acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)

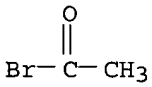


●1/2 Cu(II)

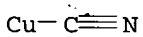
RN 506-68-3 HCAPLUS
CN Cyanogen bromide ((CN)Br) (9CI) (CA INDEX NAME)



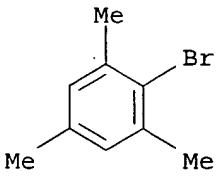
RN 506-96-7 HCAPLUS
CN Acetyl bromide (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 544-92-3 HCAPLUS
CN Copper cyanide (Cu(CN)) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

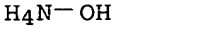


RN 576-83-0 HCAPLUS
CN Benzene, 2-bromo-1,3,5-trimethyl- (9CI) (CA INDEX NAME)

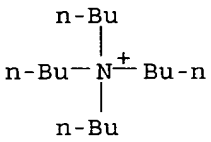


RN 1310-65-2 HCAPLUS
CN Lithium hydroxide (Li(OH)) (9CI) (CA INDEX NAME)

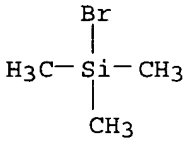
RN 1336-21-6 HCAPLUS
CN Ammonium hydroxide ((NH4)(OH)) (9CI) (CA INDEX NAME)



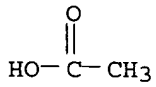
RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)

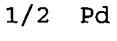


RN 2857-97-8 HCAPLUS
CN Silane, bromotrimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

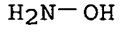


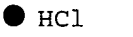
RN 3375-31-3 HCAPLUS
CN Acetic acid, palladium(2+) salt (8CI, 9CI) (CA INDEX NAME)





RN 5470-11-1 HCAPLUS
CN Hydroxylamine, hydrochloride (8CI, 9CI) (CA INDEX NAME)

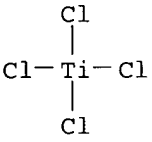




RN 7550-35-8 HCAPLUS
CN Lithium bromide (LiBr) (9CI) (CA INDEX NAME)

Br—Li

RN 7550-45-0 HCAPLUS
CN Titanium chloride (TiCl4) (T-4)- (9CI) (CA INDEX NAME)



RN 7647-10-1 HCAPLUS
CN Palladium chloride (PdCl2) (6CI, 8CI, 9CI) (CA INDEX NAME)

Cl—Pd—Cl

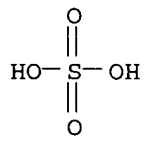
RN 7647-15-6 HCAPLUS
CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)

Br—Na

RN 7699-45-8 HCAPLUS
CN Zinc bromide (ZnBr2) (9CI) (CA INDEX NAME)

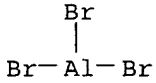
Br—Zn—Br

RN 7720-78-7 HCAPLUS
CN Sulfuric acid, iron(2+) salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Fe(II)

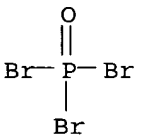
RN 7727-15-3 HCAPLUS
CN Aluminum bromide (AlBr3) (9CI) (CA INDEX NAME)



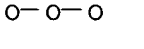
RN 7758-89-6 HCAPLUS
CN Copper chloride (CuCl) (8CI, 9CI) (CA INDEX NAME)

RN 7789-47-1 HCAPLUS
CN Mercury bromide (HgBr2) (8CI, 9CI) (CA INDEX NAME)

RN 7789-59-5 HCAPLUS
CN Phosphoric tribromide (9CI) (CA INDEX NAME)

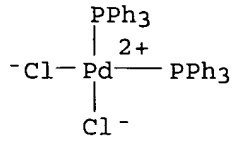


RN 10028-15-6 HCAPLUS
CN Ozone (8CI, 9CI) (CA INDEX NAME)

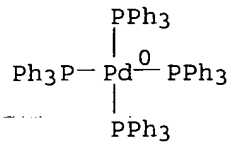


RN 10035-10-6 HCAPLUS
CN Hydrobromic acid (8CI, 9CI) (CA INDEX NAME)

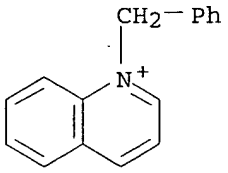
RN 13965-03-2 HCAPLUS
CN Palladium, dichlorobis(triphenylphosphine)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



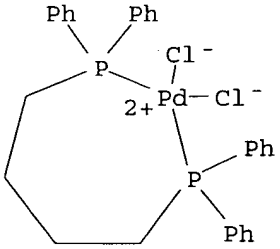
RN 14221-01-3 HCAPLUS
CN Palladium, tetrakis(triphenylphosphine)-, (T-4)- (9CI) (CA INDEX NAME)



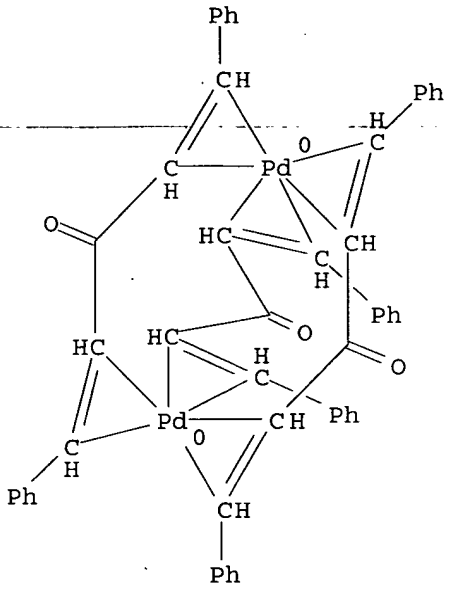
RN 26323-01-3 HCAPLUS
CN Quinolinium, 1-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)



RN 29964-62-3 HCAPLUS
CN Palladium, [1,4-butanediylbis[diphenylphosphine-κP]]dichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)

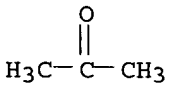


RN 51364-51-3 HCAPLUS
CN Palladium, tris[μ-[(1,2-η:4,5-η)-(1E,4E)-1,5-diphenyl-1,4-pentadien-3-one]]di- (9CI) (CA INDEX NAME)

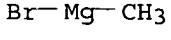


IT **67-64-1**, 2-Propanone **75-16-1 100-58-3**
106-96-7 108-24-7 108-95-2, **Phenol**
112-71-0 122-51-0 124-63-0, Methanesulfonyl
chloride **135-02-4 623-00-7 2259-30-5**
13058-25-8 13735-81-4 17015-31-5
21970-14-9 24424-99-5 34896-80-5
61049-69-2 62479-73-6 73296-31-8
171926-14-0 189001-08-9 367906-47-6
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(review of preparation of pyridines, pyridine-1-oxides and pyridinium salts via cyclization, ring transformations, aromatization and substituent modification)

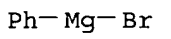
RN 67-64-1 HCAPLUS
CN 2-Propanone (9CI) (CA INDEX NAME)



RN 75-16-1 HCAPLUS
CN Magnesium, bromomethyl- (8CI, 9CI) (CA INDEX NAME)

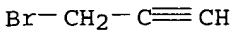


RN 100-58-3 HCAPLUS
CN Magnesium, bromophenyl- (8CI, 9CI) (CA INDEX NAME)

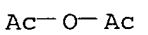


RN 106-96-7 HCAPLUS

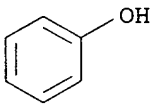
CN 1-Propyne, 3-bromo- (9CI) (CA INDEX NAME)



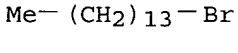
RN 108-24-7 HCAPLUS
CN Acetic acid, anhydride (9CI) (CA INDEX NAME)



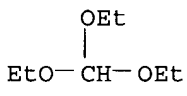
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



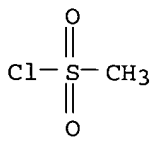
RN 112-71-0 HCAPLUS
CN Tetradecane, 1-bromo- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



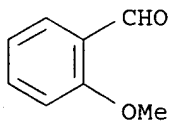
RN 122-51-0 HCAPLUS
CN Ethane, 1,1',1''-[methylidynetris(oxy)]tris- (9CI) (CA INDEX NAME)



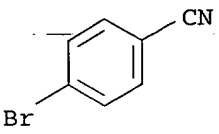
RN 124-63-0 HCAPLUS
CN Methanesulfonyl chloride (6CI, 8CI, 9CI) (CA INDEX NAME)



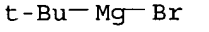
RN 135-02-4 HCAPLUS
CN Benzaldehyde, 2-methoxy- (9CI) (CA INDEX NAME)



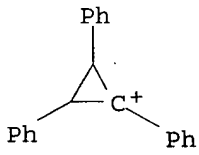
RN 623-00-7 HCAPLUS
CN Benzonitrile, 4-bromo- (9CI) (CA INDEX NAME)



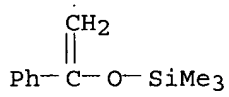
RN 2259-30-5 HCAPLUS
CN Magnesium, bromo(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



RN 13058-25-8 HCAPLUS
CN Cyclopropylium, 1,2,3-triphenyl-, bromide (8CI, 9CI) (CA INDEX NAME)

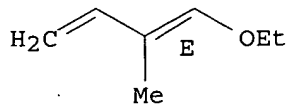


RN 13735-81-4 HCAPLUS
CN Silane, trimethyl[(1-phenylethenyl)oxy]- (9CI) (CA INDEX NAME)

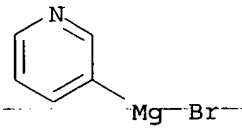


RN 17015-31-5 HCAPLUS
CN 1,3-Butadiene, 1-ethoxy-2-methyl-, (1E)- (9CI) (CA INDEX NAME)

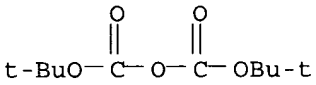
Double bond geometry as shown.



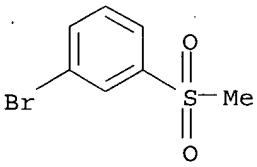
RN 21970-14-9 HCAPLUS
CN Magnesium, bromo-3-pyridinyl- (9CI) (CA INDEX NAME)



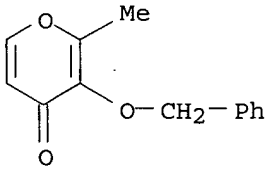
RN 24424-99-5 HCAPLUS
CN Dicarbonic acid, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



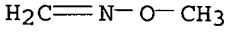
RN 34896-80-5 HCAPLUS
CN Benzene, 1-bromo-3-(methylsulfonyl)- (9CI) (CA INDEX NAME)



RN 61049-69-2 HCAPLUS
CN 4H-Pyran-4-one, 2-methyl-3-(phenylmethoxy)- (9CI) (CA INDEX NAME)

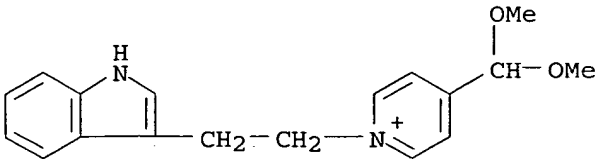


RN 62479-73-6 HCAPLUS
CN Formaldehyde, O-methyloxime (7CI, 9CI) (CA INDEX NAME)



RN 73296-31-8 HCAPLUS
CN Silane, trimethyl(phenyltelluro)- (9CI) (CA INDEX NAME)

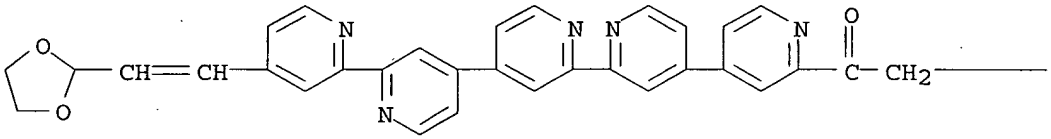
RN 171926-14-0 HCAPLUS
CN Pyridinium, 4-(dimethoxymethyl)-1-[2-(1H-indol-3-yl)ethyl]-, bromide (9CI) (CA INDEX NAME)



● Br^-

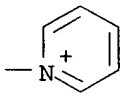
RN 189001-08-9 HCAPLUS
CN Pyridinium, 1-[2-[4-[2-(1,3-dioxolan-2-yl)ethenyl][2,2':4',4'':2'',2''':4'',4''''-quinquepyridin]-2''''-yl]-2-oxoethyl]-, bromide (9CI) (CA INDEX NAME)

PAGE 1-A

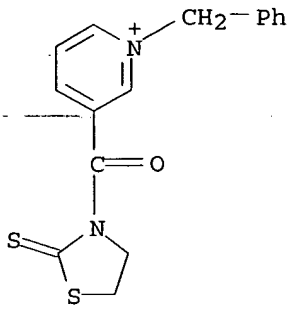


● Br^-

PAGE 1-B

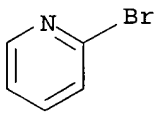


RN 367906-47-6 HCAPLUS
CN Pyridinium, 1-(phenylmethyl)-3-[(2-thioxo-3-thiazolidinyl)carbonyl]-, bromide (9CI) (CA INDEX NAME)

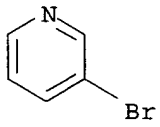


● Br^-

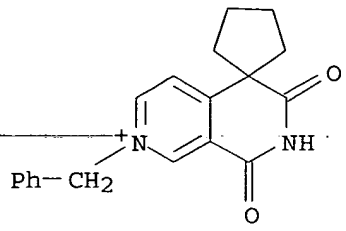
IT **109-04-6P 626-55-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(review of preparation of pyridines, pyridine-1-oxides and pyridinium salts via cyclization, ring transformations, aromatization and substituent modification)
RN 109-04-6 HCAPLUS
CN Pyridine, 2-bromo- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 626-55-1 HCAPLUS
CN Pyridine, 3-bromo- (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **74569-95-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(review of preparation of pyridines, pyridine-1-oxides and pyridinium salts via cyclization, ring transformations, aromatization and substituent modification)
RN 74569-95-2 HCAPLUS
CN Spiro[cyclopentane-1,4'(1'H)-[2,7]naphthyridinium], 2',3'-dihydro-1',3'-dioxo-7'-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)



● Br^-

L33 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:349044 HCAPLUS
DOCUMENT NUMBER: 142:394138
TITLE: Water-resistant carbonylation catalyst system for the production of diaryl carbonates via the direct carbonylation of phenolic compounds
INVENTOR(S): Soloveichik, Grigorii Lev; Chuck, Timothy Leigh; Shalyaev, Kirill Vladimirovich; Pressman, Eric James; Bonitatebus, Peter John
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005085656	A1	20050421	US 2003-687411	20031015
WO 2005040089	A2	20050506	WO 2004-US30610	20040917

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

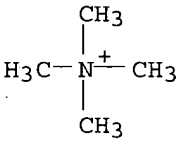
PRIORITY APPLN. INFO.: US 2003-687411 A 20031015
OTHER SOURCE(S): CASREACT 142:394138

AB A method of increasing the amount of diaryl carbonates (e.g., di-Ph carbonate) produced per amount of catalyst consumed in a phenolic compound (e.g., phenol) carbonylation process is described. Phenolic compound carbonylation produces water as a reaction byproduct which reduces the turnover number (TON) of the catalyst. A mixture of a phenolic precursor, a **base**-containing catalyst and **co-catalyst** components and at least one chemical additive comprising a **halide** or hydroxide of alkali metal or alkaline earth metal when carbonylated together under specific conditions increases the TON and water resistivity of a **palladium** catalyst. The metal **halide** likely

makes the catalyst less susceptible to degradation by water hence increasing the reaction yield per weight of catalyst consumed.

IT **75-59-2, Tetramethylammonium hydroxide**
1310-58-3, Potassium hydroxide, uses
1310-65-2, Lithium hydroxide 1310-73-2
, Sodium hydroxide, uses **7440-05-3**,
Palladium, uses **7440-32-6**, Titanium, uses
7440-50-8, Copper, uses **7550-35-8**, Lithium bromide
7789-48-2, Magnesium bromide **14024-61-4**,
Palladium acetylacetonate 27143-60-8,
Triethylamine monohydrate
RL: CAT (Catalyst use); USES (Uses)
(in a water-resistant carbonylation catalyst system for the production of diaryl carbonates via the direct carbonylation of phenolic compds.)

RN 75-59-2 HCAPLUS
CN Methanaminium, N,N,N-trimethyl-, hydroxide (9CI) (CA INDEX NAME)



● OH^-

RN 1310-58-3 HCAPLUS
CN Potassium hydroxide (K(OH)) (9CI) (CA INDEX NAME)

K—OH

RN 1310-65-2 HCAPLUS
CN Lithium hydroxide (Li(OH)) (9CI) (CA INDEX NAME)

Li—OH

RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na—OH

RN 7440-05-3 HCAPLUS
CN Palladium (8CI, 9CI) (CA INDEX NAME)

Pd

RN 7440-32-6 HCAPLUS
CN Titanium (8CI, 9CI) (CA INDEX NAME)

Ti

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

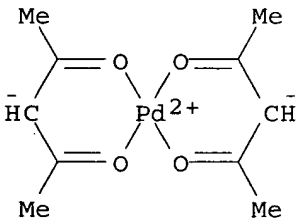
RN 7550-35-8 HCAPLUS
CN Lithium bromide (LiBr) (9CI) (CA INDEX NAME)

Br—Li

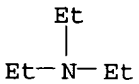
RN 7789-48-2 HCAPLUS
CN Magnesium bromide (MgBr2) (9CI) (CA INDEX NAME)

Br—Mg—Br

RN 14024-61-4 HCAPLUS
CN Palladium, bis(2,4-pentanedionato-κO,κO')-, (SP-4-1)- (9CI)
(CA INDEX NAME)



RN 27143-60-8 HCAPLUS
CN Ethanamine, N,N-diethyl-, monohydrate (9CI) (CA INDEX NAME)



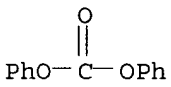
● H_2O

IT **630-08-0**, **Carbon monoxide**, reactions
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(in a water-resistant carbonylation catalyst system for the production of diaryl **carbonates** via the direct carbonylation of **phenolic** compds.)
RN 630-08-0 HCAPLUS

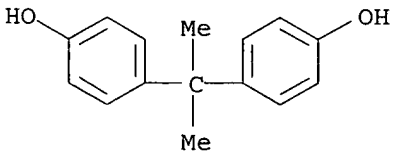
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

IT **7782-44-7**, **Oxygen**, reactions
RL: RGT (Reagent); RACT (Reactant or reagent)
(in a water-resistant carbonylation catalyst system for the production of diaryl carbonates via the direct carbonylation of phenolic compds.)
RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

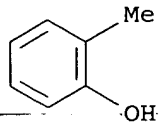
IT **102-09-0P**, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(water-resistant carbonylation catalyst system for the production of **diaryl carbonates** via the direct carbonylation of phenolic compds.)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



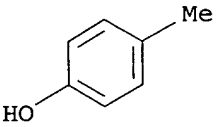
IT **80-05-7**, **Bisphenol A**, reactions
95-48-7, o-**Cresol**, reactions **106-44-5**, p-**Cresol**, reactions **108-39-4**, m-**Cresol**, reactions **108-95-2**, **Phenol**, reactions **119-36-8**, **Methyl salicylate 371-41-5**, **4-Fluorophenol**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(water-resistant carbonylation catalyst system for the production of diaryl **carbonates** via the direct carbonylation of **phenolic** compds.)
RN 80-05-7 HCAPLUS
CN Phenol, 4,4'-(1-methylethylidene)bis- (9CI) (CA INDEX NAME)



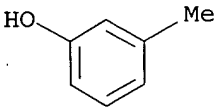
RN 95-48-7 HCAPLUS
CN Phenol, 2-methyl- (9CI) (CA INDEX NAME)



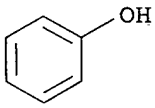
RN 106-44-5 HCAPLUS
CN Phenol, 4-methyl- (9CI) (CA INDEX NAME)



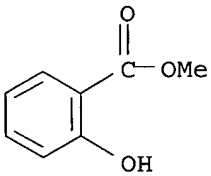
RN 108-39-4 HCAPLUS
CN Phenol, 3-methyl- (9CI) (CA INDEX NAME)



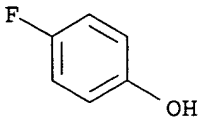
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



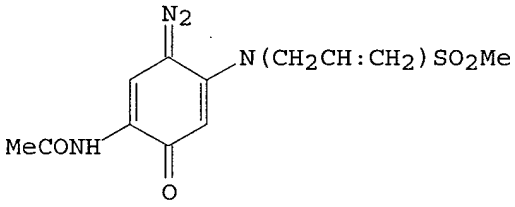
RN 119-36-8 HCAPLUS
CN Benzoic acid, 2-hydroxy-, methyl ester (9CI) (CA INDEX NAME)



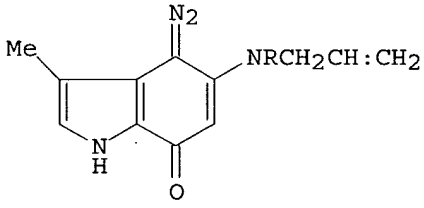
RN 371-41-5 HCAPLUS
CN Phenol, 4-fluoro- (9CI) (CA INDEX NAME)



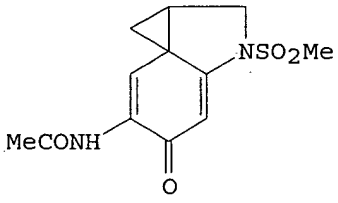
L33 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:228664 HCAPLUS
DOCUMENT NUMBER: 114:228664
TITLE: Synthesis of cycloprop[c]indol-5-ones from 4-diazo-3-[n-(2-propenyl)amido]cyclohexadien-1-ones. Exploration of copper(I) and copper(II) complexes as catalysts
AUTHOR(S): Sundberg, Richard J.; Pitts, William J.
CORPORATE SOURCE: Dep. Chem., Univ. Virginia, Charlottesville, VA, 22901, USA
SOURCE: Journal of Organic Chemistry (1991), 56(9), 3048-54
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 114:228664
GI



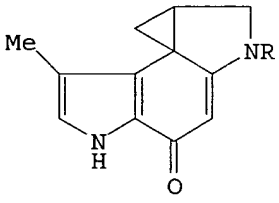
I



II



III



IV

AB The cyclization of diazo(propenylamino)cyclohexadienones (I) and (II; R = SO2Me, COMe) to cyclopropindolones (III) and (IV) under the influence of Cu(I) and Cu(II) compds. has been investigated. Catalysis is observed with Cu(I) triflate, the CO complex of Cu(I) triflate, and the CO complexes of trifluoropentanedionato- and hexafluoropentanedionatoCu(I). The best results, essentially quant. conversion, are achieved with a catalyst solution containing trifluoropentanedionato Cu(I) carbonyl and 1 equiv of BuNH2. No significant enantioselectivity is observed with a chiral salicyliminato Cu(II), [(trifluoroacetyl)camphorato Cu(I) carbonyl, or a trifluoropentanedionato Cu(I) carbonyl solution containing (S)-α-

naphthylethylamine. A mechanistic interpretation involving reductive dediazonization, exo-trig radical cyclization, and cyclopropane formation by the resulting intermediate is proposed.

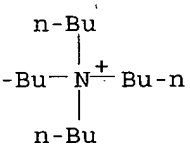
IT **7440-05-3**, **Palladium**, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for hydrogenation of nitro(propenylacetamido)indole)

RN 7440-05-3 HCAPLUS
CN Palladium (8CI, 9CI) (CA INDEX NAME)

Pd

IT **1643-19-2**, Tetrabutylammonium bromide
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of bromonitropropenylaniline in presence of, triethylamine and **palladium** acetate)

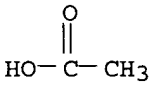
RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



● Br^-

IT **3375-31-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of bromonitropropenylaniline in presence of, triethylamine and tetrabutylammonium bromide)

RN 3375-31-3 HCAPLUS
CN Acetic acid, palladium(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Pd(II)

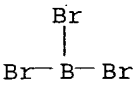
IT **7789-45-9**, Copper dibromide
RL: PROC (Process)
(cyclization of diazocyclohexadienone in presence of)

RN 7789-45-9 HCAPLUS
CN Copper bromide (CuBr2) (6CI, 8CI, 9CI) (CA INDEX NAME)

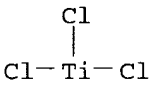
Br—Cu—Br

IT **10294-33-4**, Boron tribromide

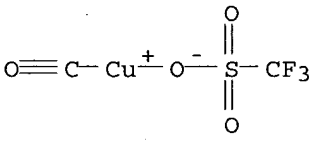
RL: RCT (Reactant); RACT (Reactant or reagent)
(isomerization of nitroindole derivative with)
RN 10294-33-4 HCAPLUS
CN Borane, tribromo- (9CI) (CA INDEX NAME)



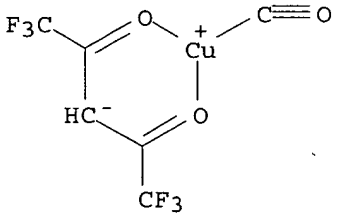
IT **7705-07-9P**, Titanium chloride (TiCl3), preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 7705-07-9 HCAPLUS
CN Titanium chloride (TiCl3) (8CI, 9CI) (CA INDEX NAME)



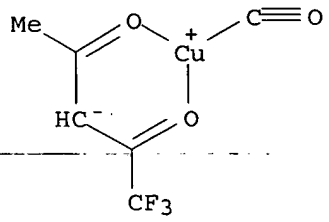
IT **81967-72-8P 95345-21-4P 95345-22-5P**
133471-93-9P 133471-94-0P 133574-98-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as catalyst for cyclopropanation of
diazo(propenylamino)cyclohexadienone derivs.)
RN 81967-72-8 HCAPLUS
CN Copper, carbonyl(trifluoromethanesulfonato-κO)- (9CI) (CA INDEX NAME)



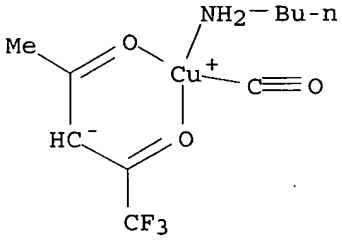
RN 95345-21-4 HCAPLUS
CN Copper, carbonyl(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-O,O')- (9CI) (CA INDEX NAME)



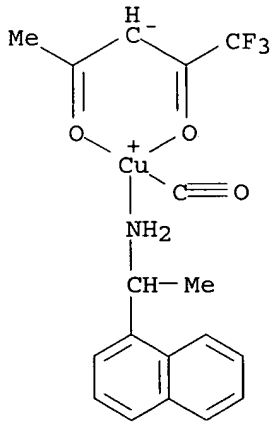
RN 95345-22-5 HCAPLUS
CN Copper, carbonyl(1,1,1-trifluoro-2,4-pentanedionato-O,O')- (9CI) (CA INDEX NAME)



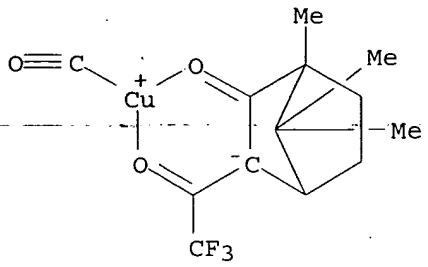
RN 133471-93-9 HCAPLUS
CN Copper, (1-butanamine)carbonyl(1,1,1-trifluoro-2,4-pentanedionato-O,O')-, (T-4)- (9CI) (CA INDEX NAME)



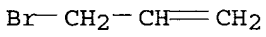
RN 133471-94-0 HCAPLUS
CN Copper, carbonyl(α-methyl-1-naphthalenemethanamine)(1,1,1-trifluoro-2,4-pentanedionato-O,O')-, [T-4-(S)]- (9CI) (CA INDEX NAME)



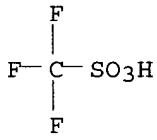
RN 133574-98-8 HCAPLUS
CN Copper, carbonyl[1,7,7-trimethyl-3-(trifluoroacetyl)bicyclo[2.2.1]heptan-2-onato-O,O']- (9CI) (CA INDEX NAME)



IT **106-95-6**, Allyl bromide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (benzyloxy)bromonitroaniline)
RN 106-95-6 HCAPLUS
CN 1-Propene, 3-bromo- (9CI) (CA INDEX NAME)



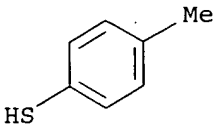
IT **42152-44-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with **carbon monoxide** and hexafluoropentanedione)
RN 42152-44-3 HCAPLUS
CN Methanesulfonic acid, trifluoro-, copper(1+) salt (9CI) (CA INDEX NAME)



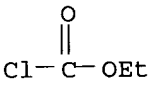
● Cu(I)

IT **630-08-0**, **Carbon monoxide**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cuprous oxide and trifluoromethanesulfonic acid)
RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

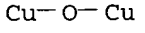
IT **106-45-6**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with diazocyclohexadienone)
RN 106-45-6 HCAPLUS
CN Benzenethiol, 4-methyl- (9CI) (CA INDEX NAME)



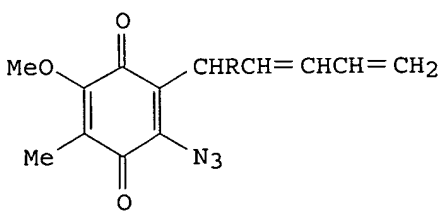
IT **541-41-3**, Ethyl chloroformate
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with nitro(propenylacetamido)indole)
RN 541-41-3 HCAPLUS
CN Carbonochloridic acid, ethyl ester (9CI) (CA INDEX NAME)



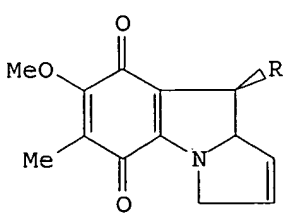
IT **1317-39-1**, Cuprous oxide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with trifluoromethanesulfonic acid and **carbon monoxide**)
RN 1317-39-1 HCAPLUS
CN Copper oxide (Cu2O) (8CI, 9CI) (CA INDEX NAME)



L33 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:515455 HCAPLUS
DOCUMENT NUMBER: 107:115455
TITLE: Copper-catalyzed double cyclization reaction of azidoquinones: one-step synthesis of dihydropyrroloindoloquinones and related quinolinoquinones
AUTHOR(S): Naruta, Yoshinori; Nagai, Naoshi; Arita, Yoshihiro; Maruyama, Kazuhiro
CORPORATE SOURCE: Fac. Sci., Kyoto Univ., Kyoto, 606, Japan
SOURCE: Journal of Organic Chemistry (1987), 52(18), 3956-67
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 107:115455
GI



I



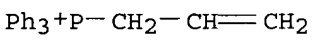
II

AB Intramol. cyclization of azido(pentadienyl)quinone I (R = H) has been examined in the presence of metal salts, e.g., MLn (M = Cu, Mn, Co , etc.; L = acetylacetonato). Copper or CuL2 exhibited the highest catalytic activity both to the decomposition of the azide and to the formation of the corresponding dihydropyrroloindoloquinone II (R = H) which was obtained in 58% yield in one step. The related azido(hexadienyl)quinones gave the corresponding quinolinoquinone derivs. in moderate yields. Thus, pyrolysis of hexadienylquinone derivative I (R = Me) in benzene in the presence of CuL2 afforded 27% quinolinoquinone. The double cyclization reaction proceeds with extremely high regio- and stereoselectivity, and the generality was established. Quinonoid structures and the presence of a conjugated dienyl side chain at the proximal position to an azide group are essential for the completion of this double cyclization reaction. The role of the copper catalyst to the cyclization reaction is also discussed.

IT **1560-54-9**, Allyltriphenylphosphonium bromide
RL: RCT (Reactant); RACT (Reactant or reagent)
(allylation of (formylethyl)benzene derivative with lithiated derivative of)

RN 1560-54-9 HCAPLUS

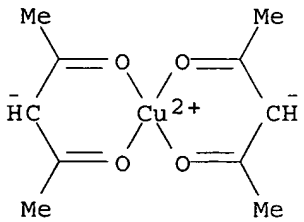
CN Phosphonium, triphenyl-2-propenyl-, bromide (9CI) (CA INDEX NAME)



IT **13395-16-9**
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for thermal decomposition and ring closure of azido alkadienyl quinones)

RN 13395-16-9 HCAPLUS

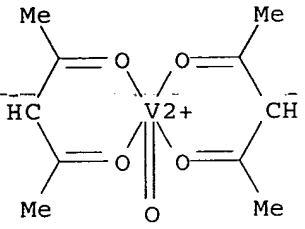
CN Copper, bis(2,4-pentanedionato-κO,κO')-, (SP-4-1)- (9CI) (CA INDEX NAME)



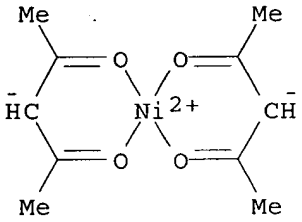
IT **3153-26-2**, Oxobis(acetylacetonato)vanadium **3264-82-2**, Bis(acetylacetonato)nickel **13476-99-8**, Tris(acetylacetonato)vanadium **14024-18-1**, Tris(acetylacetonato)iron **14024-48-7**, Bis(acetylacetonato)cobalt **14024-58-9**, Bis(acetylacetonato)manganese **21679-31-2**, Tris(acetylacetonato)chromium
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for thermal decomposition of azidopentadienyl quinone)

RN 3153-26-2 HCAPLUS

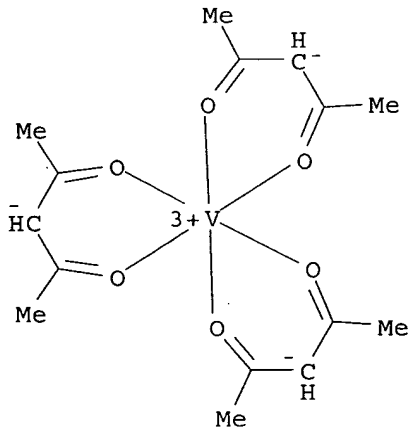
CN Vanadium, oxobis(2,4-pentanedionato-κO,κO')-, (SP-5-21)- (9CI) (CA INDEX NAME)



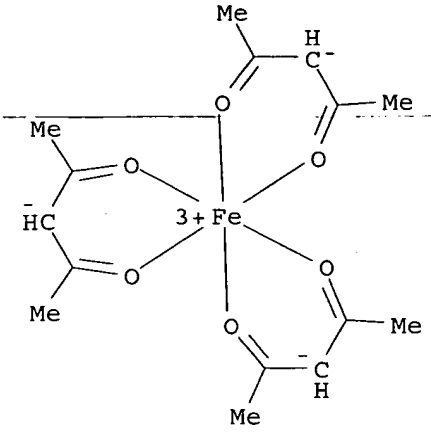
RN 3264-82-2 HCAPLUS
CN Nickel, bis(2,4-pentanedionato-κO,κO')-, (SP-4-1)- (9CI) (CA INDEX NAME)



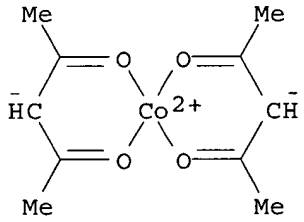
RN 13476-99-8 HCAPLUS
CN Vanadium, tris(2,4-pentanedionato-κO,κO')-, (OC-6-11)- (9CI) (CA INDEX NAME)



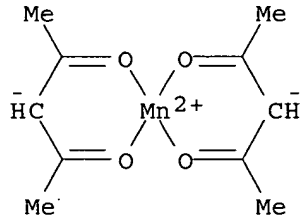
RN 14024-18-1 HCAPLUS
CN Iron, tris(2,4-pentanedionato-κO,κO')-, (OC-6-11)- (9CI) (CA INDEX NAME)



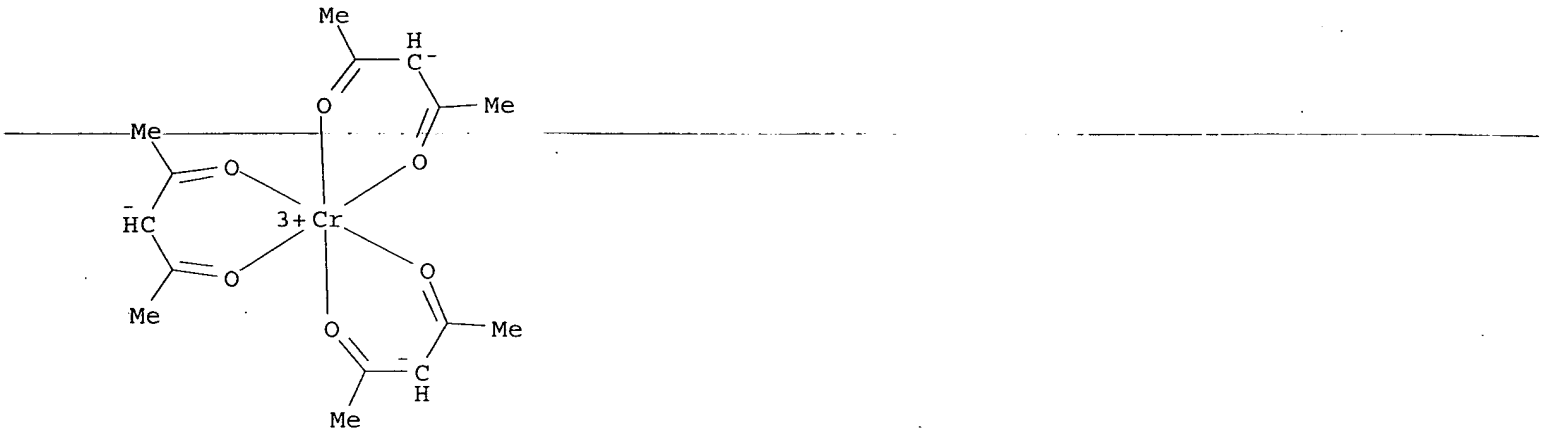
RN 14024-48-7 HCAPLUS
CN Cobalt, bis(2,4-pentanedionato-κO,κO')-, (SP-4-1)- (9CI) (CA INDEX NAME)



RN 14024-58-9 HCAPLUS
CN Manganese, bis(2,4-pentanedionato-κO,κO')- (9CI) (CA INDEX NAME)

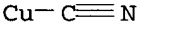


RN 21679-31-2 HCAPLUS
CN Chromium, tris(2,4-pentanedionato-κO,κO')-, (OC-6-11)- (9CI) (CA INDEX NAME)

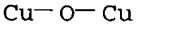


IT **544-92-3**, Cuprous cyanide **1317-39-1**, Cuprous oxide, uses and miscellaneous **7440-50-8**, Copper, uses and miscellaneous **7758-89-6**, Cuprous chloride **7787-70-4**, Cuprous bromide **10380-28-6** **14024-63-6**, Bis(acetylacetonato)zinc **14040-05-2** **14128-84-8** **14167-15-8** **14172-91-9** **14221-10-4** **14263-53-7** **14284-06-1** **14284-89-0**, Tris(acetylacetonato)manganese **14324-82-4** **14405-48-2** **14523-25-2** **14781-49-8** **21679-46-9**, Tris(acetylacetonato)cobalt **42152-44-3**, Cuprous triflate
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for thermal decomposition of azidopentadienylquinone)

RN 544-92-3 HCAPLUS
CN Copper cyanide (Cu(CN)) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1317-39-1 HCAPLUS
CN Copper oxide (Cu2O) (8CI, 9CI) (CA INDEX NAME)



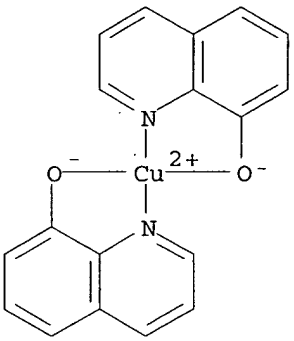
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 7758-89-6 HCAPLUS
CN Copper chloride (CuCl) (8CI, 9CI) (CA INDEX NAME)

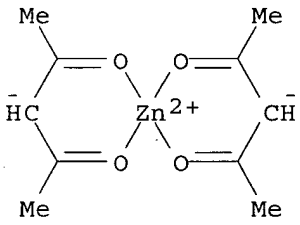
RN 7787-70-4 HCAPLUS
CN Copper bromide (CuBr) (8CI, 9CI) (CA INDEX NAME)

Br—Cu

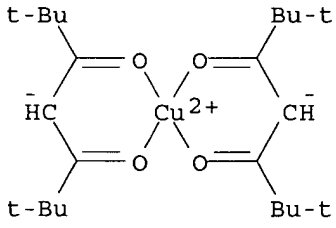
RN 10380-28-6 HCAPLUS
CN Copper, bis(8-quinolinolato-κN1,κO8)- (9CI) (CA INDEX NAME)



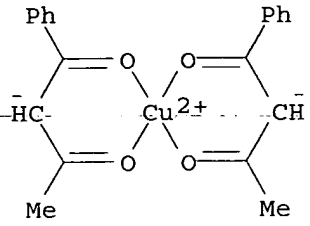
RN 14024-63-6 HCAPLUS
CN Zinc, bis(2,4-pentanedionato-κO,κO')-, (T-4)- (9CI) (CA INDEX NAME)



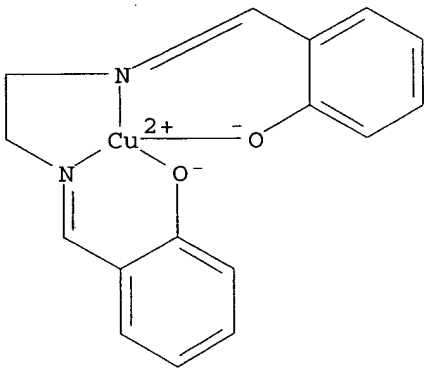
RN 14040-05-2 HCAPLUS
CN Copper, bis(2,2,6,6-tetramethyl-3,5-heptanedionato-κO,κO')- (9CI) (CA INDEX NAME)



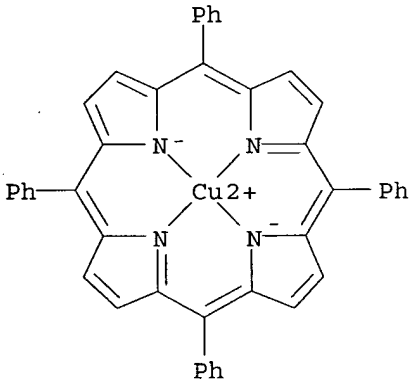
RN 14128-84-8 HCAPLUS
CN Copper, bis(1-phenyl-1,3-butanedionato-κO,κO')- (9CI) (CA INDEX NAME)



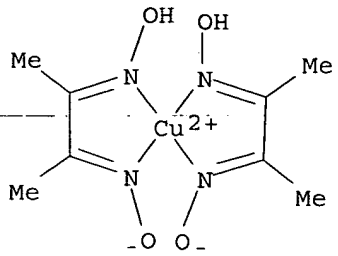
RN 14167-15-8 HCAPLUS
CN Copper, [[2,2'-[1,2-ethanediylbis[(nitrilo-κN)methylidyne]]bis[pheno lato-κO]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



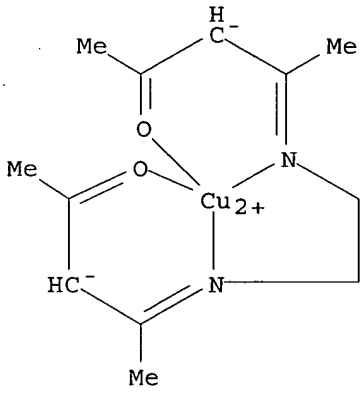
RN 14172-91-9 HCAPLUS
CN Copper, [5,10,15,20-tetraphenyl-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]-, (SP-4-1)- (9CI) (CA INDEX NAME)



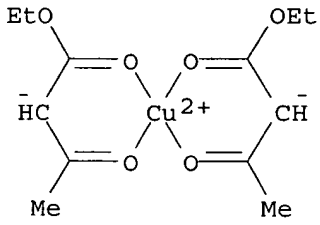
RN 14221-10-4 HCAPLUS
CN Copper, bis[[2,3-butanedione di(oximato-κN)](1-)]-, (SP-4-1)- (9CI) (CA INDEX NAME)



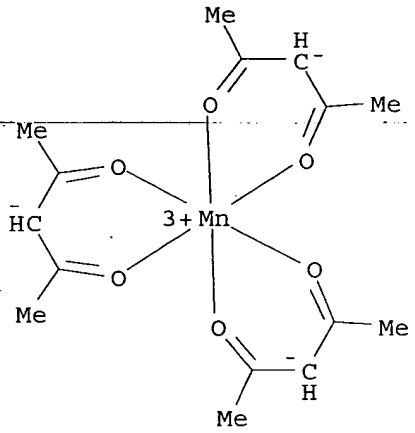
RN 14263-53-7 HCAPLUS
CN Copper, [[4,4'-[1,2-ethanediyldi(nitrilo-κN)]bis[2-pentanonato-κO]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



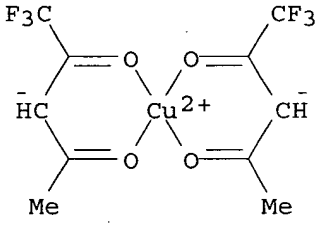
RN 14284-06-1 HCAPLUS
CN Copper, bis[ethyl 3-(oxo-κO)butanoato-κO']- (9CI) (CA INDEX NAME)



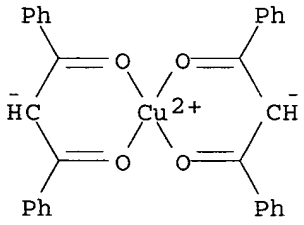
RN 14284-89-0 HCAPLUS
CN Manganese, tris(2,4-pentanedionato-κO,κO')-, (OC-6-11)- (9CI) (CA INDEX NAME)



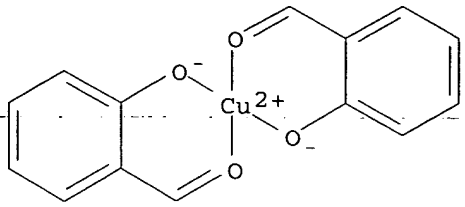
RN 14324-82-4 HCAPLUS
CN Copper, bis(1,1,1-trifluoro-2,4-pentanedionato-κO,κO')- (9CI) (CA INDEX NAME)



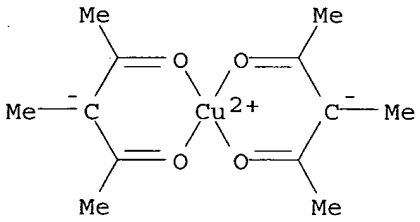
RN 14405-48-2 HCAPLUS
CN Copper, bis(1,3-diphenyl-1,3-propanedionato-κO,κO')-, (SP-4-1)- (9CI) (CA INDEX NAME)



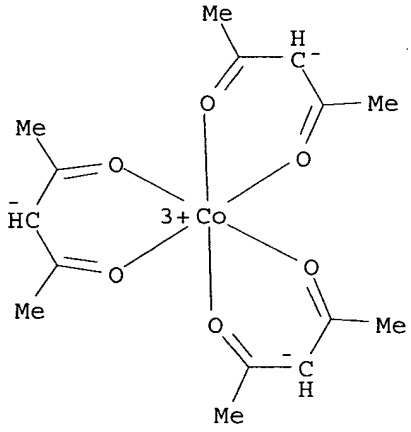
RN 14523-25-2 HCAPLUS
CN Copper, bis[2-(hydroxy-κO)benzaldehydato-κO]- (9CI) (CA INDEX NAME)



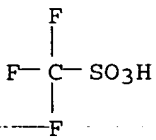
RN 14781-49-8 HCAPLUS
CN Copper, bis(3-methyl-2,4-pentanedionato-κO,κO')- (9CI) (CA INDEX NAME)



RN 21679-46-9 HCAPLUS
CN Cobalt, tris(2,4-pentanedionato-κO,κO')-, (OC-6-11)- (9CI) (CA INDEX NAME)

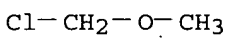


RN 42152-44-3 HCAPLUS
CN Methanesulfonic acid, trifluoro-, copper(1+) salt (9CI) (CA INDEX NAME)



● Cu(I)

IT **107-30-2**, Chloromethyl methyl **ether**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(methoxymethylation by, of substituted **phenols**)
RN 107-30-2 HCAPLUS
CN Methane, chloromethoxy- (9CI) (CA INDEX NAME)

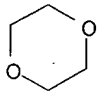


L33 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:33289 HCAPLUS
DOCUMENT NUMBER: 106:33289
TITLE: E and C parameters from Hammett substituent constants and use of E and C to understand cobalt-carbon bond energies
AUTHOR(S): Drago, Russell S.; Wong, Ngai; Bilgrien, Carl; Vogel, Glenn C.
CORPORATE SOURCE: Chem. Dep., Univ. Florida, Gainesville, FL, 32611, USA
SOURCE: Inorganic Chemistry (1987), 26(1), 9-14
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An updated list of E and C parameters was calculated from a larger data **base** than that used in an earlier fit. The new data **base** included 42 acids, 55 **bases**, and about 500 data points. Best-fit parameters for 13 enthalpy-frequency shift relations were also reported. From this updated list, relationships were discovered which lead to equations that enabled calcn. of E and C parameters from Hammett substituent consts. for a series of substituted phenols and pyridines. This procedure provided a simple method for greatly increasing the number of acids and **bases** included in the correlation. An E and C anal. was used to study the dissociation energy of the **Co**-C bond in alkyl-substituted bis(dimethylglyoximato)cobalt(II) complexes. This anal. gave calculated dissociation energies that were within exptl. error of the measured values and gave a value for **Co**-C bond dissociation for the unligated complex. The basic procedure allows for the incorporation of ligand influence on bond dissociation energies into the correlation.
IT **115-10-6**, Dimethyl **ether** **123-91-1**, Dioxane, properties **141-78-6**, Ethyl acetate, properties **142-96-1**, Dibutyl **ether** **150-19-6**, m-Methoxyphenol **150-76-5**, p-Methoxyphenol **352-93-2**, Diethyl sulfide **371-41-5**, p-Fluorophenol **626-55-1**, 3-Bromopyridine **629-82-3**, Di-n-octyl **ether** **7789-33-5** **12081-18-4** **14781-45-4**, Bis(hexafluoroacetylacetonato)copper(II)
RL: **RCT (Reactant)**; RACT (Reactant or reagent)

(electrostatic and covalent parameters of)
RN 115-10-6 HCAPLUS
CN Methane, oxybis- (9CI) (CA INDEX NAME)

$H_3C-O-CH_3$

RN 123-91-1 HCAPLUS
CN 1,4-Dioxane (9CI) (CA INDEX NAME)



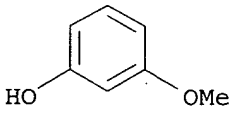
RN 141-78-6 HCAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et—O—Ac

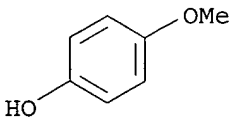
RN 142-96-1 HCAPLUS
CN Butane, 1,1'-oxybis- (9CI) (CA INDEX NAME)

n-Bu—O—Bu-n

RN 150-19-6 HCAPLUS
CN Phenol, 3-methoxy- (9CI) (CA INDEX NAME)



RN 150-76-5 HCAPLUS
CN Phenol, 4-methoxy- (9CI) (CA INDEX NAME)

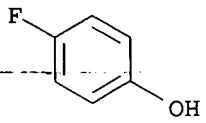


RN 352-93-2 HCAPLUS
CN Ethane, 1,1'-thiobis- (9CI) (CA INDEX NAME)

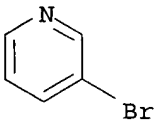
$H_3C-CH_2-S-CH_2-CH_3$

RN 371-41-5 HCAPLUS

CN Phenol, 4-fluoro- (9CI) (CA INDEX NAME)



RN 626-55-1 HCAPLUS
CN Pyridine, 3-bromo- (6CI, 8CI, 9CI) (CA INDEX NAME)



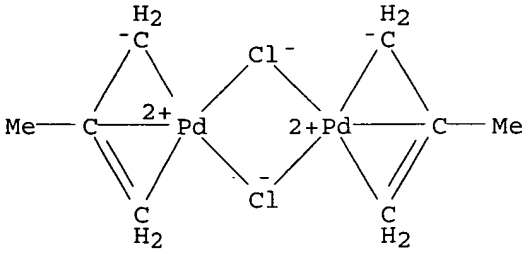
RN 629-82-3 HCAPLUS
CN Octane, 1,1'-oxybis- (9CI) (CA INDEX NAME)

Me— $(CH_2)_7$ —O— $(CH_2)_7$ —Me

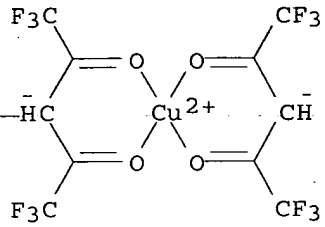
RN 7789-33-5 HCAPLUS
CN Iodine bromide (IBr) (6CI, 8CI, 9CI) (CA INDEX NAME)

Br— I

RN 12081-18-4 HCAPLUS
CN Palladium, di-μ-chlorobis[(1,2,3-η)-2-methyl-2-propenyl]di- (9CI) (CA INDEX NAME)



RN 14781-45-4 HCAPLUS
CN Copper, bis(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-κO,κO')-, (SP-4-1)- (9CI) (CA INDEX NAME)



=>